

THE AUTOMOBILE

The Home Coming of the Victor



The Vanderbilt Cup Winner "At Home"; the Trophy Which It Won October 24; the Man Who Drove It to Victory.

BRIDGEPORT, CONN., Nov. 9.—No Olympian chariot and charioteer was ever accorded a more royal welcome than Bridgeport accorded the Locomobile and George Robertson, victors in the Vanderbilt Cup race, on the occasion of their homecoming this week. The celebration was really a two-day affair, starting with a triumphal run from New York to the Connecticut city on Sunday, continuing with an afternoon of jubilant reception on Tuesday, and winding up that evening with a great banquet, at which the keynote was "local pride" over the fact that the first American car to win an international road race was "built in Bridgeport." Of course, Bridgeporters got excited.

The demonstration of enthusiasm and the wild hurrah of welcome and congratulation that marked the banquet was without dispute one of the most noteworthy evidences in the whole history of the sport in this country of how heartily Americans are ready to give encouragement to any triumph that marks the progress of the American automobile industry, and the success of American drivers in the handling of motor cars of home production in international speed competitions. As one speaker remarked: "Were every town to give its car the backing that Bridgeport does the Locomobile, there would be a corps of racing machines evolved that would furnish a topnotcher worthy of competitive comparison with the products of the world."

Illustrative of Bridgeport's universal co-operation in doing honor to the victors, it is to be noted that the banquet was promoted jointly by the Automobile Club of Bridgeport, the Bridgeport Board of Trade, the Manufacturers' Association, the Business Men's Association and the Press Club of Bridgeport. In the great dining-room of the new Stratfield Hotel were gathered 300 of Bridgeport's representative men, and still there were some

that could not find seats at the tables. No such assemblage had ever before been gathered at a banquet in the city's history.

On a pedestal in front of the long guests' table stood the historic Vanderbilt cup itself. The sight of it seemed a constant inspiration to enthusiasm. In fact, it was a hurrah dinner from start to finish. The corks had not been popping many minutes before the banqueters broke forth in song. Two songs in particular proved highly popular and were shouted in chorus at every provocation, and the provocations were frequent. One was sung to the tune of "Harrigan" and ran as follows:

R-O-B-E-R-T-S-O-N spells Robertson,
Gee! but did you see the speed that's in him?
Devil a driver has a thing agin him.
Robertson, Robertson,
He's the king of the ring,
Not a thing can compare with Robertson.

The other had for its theme A. L. Riker, the designer of the car, and was a paraphrase on "Hallelulah":

There's a man we admire,
He's a man we all love,
In the ranks of designers
He's 'way up above.
Hallelulah! He's a corker!
Give him a cheer for the guest,
Hallelulah! Get up and holler
For our vice-president.

With 300 voices and an orchestra to accompany, the singing was indeed electrifying. It would have survived Niagara's roar.

The Hon. Stiles Judson, State attorney, who filled the post of toastmaster, was not only patriotically eloquent, but kept the fun going as well, always ready with clever repartee in response to the shots fired at him constantly from the tables. He had beautiful bouquets to hand out to Robertson, Riker and the Locomobile Company, and he did it most artistically.



Main Street in Bridgeport, Conn., with the Victor Receiving the Hearty Applause of the Multitude.

George E. Hill, speaking for Mayor Henry Lee in his absence, paid a glowing tribute to the mechanics that built the winning car.

Amzi L. Barber declared that he had started the Locomobile Company to give a job to his son-in-law, Davis, and that the presence of the Vanderbilt cup proved that he had made good. Mr. Barber quickly switched to a discussion of good roads, in the course of which he sketched their history and told of the accomplishments of Macadam and Telford. He advocated building a strip of asphalt in the center of all macadam roads, which, he said, would insure an imperishable and dustless highway. In conclusion, he declared himself in favor of the expense of roads building being divided equally among the government, the State, the county and the township, one-quarter each.

Then Judge E. K. Nicholson, on behalf of the Board of Trade, presented its engrossed resolutions of congratulations to the Locomobile Company.

S. T. Davis, Jr., in receiving them, said that the bringing of the cup to Bridgeport was primarily due to the sportsmanship and liberality of William K. Vanderbilt, Jr., and that his rules had made it possible to produce the speed machine that had evolved successful. Mr. Davis told how Dr. Thomas, of Chicago, had ordered the first racer and how that had led to the building of the two cars that had finally triumphed. He touched upon their failures and their successes on the path to the ultimate victory in the recent race. In conclusion, he said: "Racing is expensive, but it pays—when you win."

Next came the eloquent presentation by Thomas H. MacDonald of a silver shield to the designer of the winning car. Mr. Riker was brief and modest in his reply, attributing the suc-

cess of the car to the material, workmanship and superintendence supplied by the company.

Then came George Robertson's turn at recognition. It took the form of a silver cup. In presenting it, Horace E. Jackson told of the famous men that Bridgeport had given the world of invention. The inventors of the Maxim and Hotchkiss guns and the Howe sewing machine were Bridgeporters. Wilson Marshall, who won the Kaiser's transatlantic yachting trophy, and Harry Porter, who is the Olympic champion at jumping, also hail from the Connecticut town. Robertson modestly thanked the donors and expressed the wish that next year the Locomobile Company would build three racers and send them over to France for the Grand Prix.

Frank G. Webb, vice-chairman of the Vanderbilt Cup Commission, extolled the sportsmanship of the donor of the cup and told how his appointment to the Racing Board by A. R. Parding-ton, and a subsequent conference, had resulted in the giving of the cup and the inauguration of the Vanderbilt races. He declared that the Locomobile's victory marked the end of the contests of great racing cars, and hoped that the Locomobile Company would be represented next year by a team of cars of 130 mm. cylinder measurement.

John C. Wetmore, who was the last of the regular speakers, suggested that the citizens of Bridgeport, embracing not only its business men but the school children as well, build at their own expense three Locomobiles and enter them for the next Grand Prix in France.

Many Prominent in the Trade at the Speaker's Table.

At the speaker's table the notables, of course, embraced S. T. Davis, Jr., the president of the Locomobile Company; A. L. Riker, its vice-president and designer; E. F. Russell, the superintendent; John A. Kingman, the advertising manager, and Driver Robertson and Mechanic Ethridge.

Other well-known celebrities in attendance were: Henry Hess, William Gray, Clarence Whitney, Howard E. Raymond, Harry Fisk, Alfred Reeves, William Hobbs, Cortland Cramp, J. H. McAlman, John F. Plummer, W. F. Fuller, Fred J. Wagner, Russell Field and William Culver.

The banquet had followed a most enthusiastic greeting in the afternoon by the city at large to Robertson and the Locomobile. Many factories were closed and all the public school children were let out to join in the welcome. At the ringing of the fire bell, sharp at 3 o'clock, George Robertson and his mechanic, Glen Ethridge, left the Locomobile factory in the victorious car, amid an ovation of hilarious cheering by the workmen in the Locomobile factory. Thousands packed the sidewalks along the line of parade and the police had hard work restraining over-



En Route "Home" Robertson Excited Interest Galore.

enthusiastic welcomers from rushing on the road and mobbing the heroes of the day with congratulations. The parade of the victorious outfit was an ovation from start to finish.

The run to Bridgeport on Sunday was a triumphal procession. Robertson started from the Locomobile headquarters in New York City, at Broadway and Seventy-sixth street, at 9:45 a. m., escorted by 10 Locomobile touring cars bearing enthusiasts. Stops were made at New Rochelle and Port Chester, where car and driver were greeted by crowds afoot and in automobiles. In fact, all along the route spectators had gathered to see the passing of the famous racing outfit. At Greenwich there was a halt for an hour at the Indian Harbor Yacht Club, where luncheon was served to the escorting caravan of New Yorkers and the contingent of Bridgeport automobilists that had come to greet the car and escort it to its home town. Just out of Greenwich on the homeward trip a ball broke in an engine bearing and necessitated the car being toured the rest of the way. Despite this inglorious form of entry to its native town, there was the most enthusiastic greeting awaiting it and its pilot by the thousands that had gathered to welcome them.

Formal Presentation of the Cup.

The formal presentation of the Vanderbilt cup to the Locomobile Company of America is scheduled to take place to-night at half-past eight o'clock at the Automobile Club of America.

An attractive program has been prepared. Besides the formal presentation of the Cup by Jefferson deMont Thompson, chairman of the Vanderbilt Cup Commission, and a limited number of speeches by men well known in the automobile world, there will be an informal social gathering in which moving pictures of this year's French Grand Prix, the Motor Parkway Sweepstakes, and the Vanderbilt Cup race, with several musical selections, and cigars and light refreshments will be features.

On this occasion many people will see the Vanderbilt trophy for the first time. Nearby will be the A. C. A. Gold Cup, which will be struggled for at Savannah on Thanksgiving Day. Five thousand invitations have been issued.

Exactly what will be the form of competition for the Vanderbilt Cup in 1909 is yet undecided. It may be a "national" contest for racing cars, but another suggestion would make it a fall event of the stock car chassis variety.



The Bicycle Cop Was Lenient to the Cup Winner.

N. A. A. M. PERFECTING TRAFFIC DEPARTMENT.

For the purpose of still further enhancing the importance of its traffic department, the National Association of Automobile Manufacturers, Inc., has arranged for a series of meetings of the traffic experts connected with the automobile factories. The department, under the arrangement recently made, now represents not only the National Association of Automobile Manufacturers, but the so-called licensed and unlicensed associations as well, embracing a membership of 93 members. Of these a great many, but not all, take full advantage of the facilities offered by the department, which attends to classification matters, checking of freight bills, the proper classification of goods shipped to and from the factories, the preparation of and all other attention to claims, etc.

Mr. Marvin, the manager of the traffic department, is at present in the West attending a meeting of one of the classification committees, and will, as soon as that meeting is over, hold meetings with the traffic managers in Cleveland, Indianapolis, Chicago and Detroit. Later on meetings will be held in Eastern cities, and it is not unlikely that general meetings will be held during the New York and Chicago shows. Arrangements are being tentatively made and meeting with approval.



Many of Bridgeport's Substantial Business Men Honored the Big Banquet with Their Presence and Enthusiasm.

ST. LOUIS HAS THREE DAYS OF VARIED RACING

ST. LOUIS, Nov. 7.—For the first time in its history St. Louis has had a three-day meet. Besides, it has had a hill-climb for the first time. The St. Louis Automobile Manufacturers' and Dealers' Association is responsible for getting the thing started, while E. A. Moross, a well-known manager of a brace of automobile actors, helped out with his really clever methods of racing on one-mile circular tracks. No one, despite several close calls, was mortally injured, unless it be a man who struck the track hard while being discharged from a Moon car in the novelty race, and the chances are in his favor. All the events were sufficiently interesting to more than satisfy the 4,000 persons who went to the old Fair Grounds race track for the events on Saturday, and the most of 7,000 which turned out on Sunday.

The hill-climb on Friday drew 500 automobiles 14 miles out on the Manchester road to Solomon's hill, where a course had been measured off sixteenths of a mile in length up the grade that increases in steepness as it runs to the summit, making a circuitous turn on the way. By foot and by car nearly 5,000 people assembled to see the speeding, for St. Louis had never had a similar event before. One accident, which might have cost the driver his life, occurred in the early part of the sprinting. A Moon car, swinging up the hill at a 40-mile clip, hit the turn too fast, and, after several contortions, settled back with a collapsed rear wheel. Until the cloud of dust subsided thousands believed that something very serious had happened, and it was a miracle that Phillip Wells, the driver, was sitting at the wheel of his car with a smile on his face.

On account of some misunderstanding between the judges—Alden H. Little, James Hagermann, Jr., and E. Percy Noel—and the contest committee of the Manufacturers' and Dealers' Association, the percentages have not yet been calculated, so that it is not yet known how the cars finished in the climb. It is probable that the Stanley special car driven by Baldwin was the winner of the free-for-all, and that the next best percentage was made by the Apperson driven by McClain. Tuttle probably took second place among the gasoline cars with a Stoddard-Dayton.

At the Circular Track Meet.

The spirit of the two-day meeting at the Fair Grounds was proclaimed in red ink, so that every one might read: "Spectators are warned to keep off the track, in case of accident, as races will continue regardless of results to spectators, drivers, or cars." The first event was only fairly started before Tim Bohnsen, a competing motorcyclist, fell from his machine and rolled forty feet, to be picked up with a broken nose and other injuries. In the third event, a special race for Moon cars, William Igou, blinded by the dust, crashed through the outer fence, near where Oldfield killed two men four years ago. As if by a miracle, car and driver escaped without a scratch.

The early accidents did not appear to dampen the spirits of other entrants, including Baldwin, who again proved the star of the day. In spite of the turns being banked only for horse-racing, he tore around them at a gait that made some of the veterans of



Final and Steepest Grade of Solomon's Hill.

the game sit up and look interested. Clinging close to the outer edge of the track almost the entire distance, so that he covered more than a mile in his circuit, he trailed a great cloud of steam and dust behind him. On the turns he seemed to shoot across diagonally, and when he had reached the straightaway of the far stretch, he shot ahead faster and faster, while the crowd in the grand stand stood up and yelled. When his time of 54.4-5 seconds for his exhibition mile was announced the wise ones shook their heads, for they knew that no gasoline car present could better the new record for a single mile, although the steamer would have been outclassed in a much longer distance.

Christie Oldfield and Ollie Savin all tried to better the steamer's time, but failed. Christie went around in Oldfield's former record time of 59 seconds; Oldfield did the same, and Ollie Savin, driving Christie's "Dreadnought," made it in 1:07. Jack Taylor drove the 45-horse-

power Stoddard-Dayton in 1:08, while Charles Soules did the distance in 1:01 5-5 with the Stearns "Red Devil."

The contests between the star drivers in heats of the Sweepstakes, the finals of which were run off Sunday, were close and interesting; but the feature race of the day proved to be the free-for-all handicap for three miles, with five cars running. It was won by Paul Caldwell, driving a six-cylinder Pierce Arrow.

Sunday's track racing was partly a repetition and a continuation of the day previous. There was one serious accident, during the novelty race, which otherwise would have been very amusing. The injured man was hurt about the head while being "discharged" from a Moon car, but will probably recover.

Summary of Solomon's Hill Climb.

CLASS A—MOTOR BUGGIES; WHEEL DIAMETER, 36 INCHES.

1. Victor	Oliver	1:53
2. Success	Siddway	2:11
3. Eureka	Allen	2:12

CLASS B—TOURING CARS, ROADSTERS, TOURABOUTS.

Piston area under 50 square inches.

1. Buick	McQuillen	1:04 4-5
2. Chalmers-Detroit	Paine	1:05 2-5
3. Jackson	Delaney	1:21 3-5

CLASS C—TOURING CARS, ROADSTERS, TOURABOUTS.

Piston diameter over 50 and under 65 square inches.

1. Apperson	McLain	1:00 2-5
2. Moon	Igou	1:03

CLASS D—TOURING CARS, ROADSTERS, TOURABOUTS.

Piston diameter over 65 and under 90 square inches.

1. Stoddard-Dayton	Tuttle	:49
2. Packard	Lewis	:54 4-5
3. Stevens-Duryea	Blumcoe	:55 1-5

CLASS E—TOURING CARS, ROADSTERS, TOURABOUTS.

Piston area over 90 square inches.

1. Apperson	McLain	:45
2. Stearns	Oldfield	:46 2-5
3. Stearns	Soules	:46 2-5

FREE-FOR-ALL.

1. Stanley Special	Baldwin	:40 4-5
2. Stanley	Baldwin	:43 1-5
3. Stanley	Woodward	:45
4. Apperson	McLain	:46 2-5
5. Stanley	Cull	:46 2-5
6. Stoddard-Dayton	Tuttle	:49
7. Stearns	Oldfield	:49 2-5
8. Pierce	Caldwell	:49 4-5



SAVANNAH, GA., Nov. 10.—Savannah may be said to be on the last lap of its preparations for the Grand Prize race of Thanksgiving Day, and for the light car event of the day before. The greater number of foreign and American drivers are already located in their camps and are becoming acquainted with the picturesque course, which, banked and oiled, has been in condition for racing for several days. In fact, the track was ready for the race a week ago when the advance guard of the drivers arrived. Those who are here started Monday speeding their machines over the course. No requirement has been made of them except that they exercise caution when in the neighborhood of the city or the settlements. The road, however, runs from the city out towards the marshes and the sea, and in some cases is cut for miles through virgin forest with never a house near the track, so that except in few instances there is now no impediment to the drivers cutting their flyers loose whenever they choose. However, to give them every opportunity to learn the course under speed conditions, they will be given a guarded track for two hours a day for ten days before the races. The signs and banners are already up on the course, showing the turns and crossings, and giving the other information necessary to the driver. It is possible that the foreign signs may also be used.

It is the consensus of opinion that all American records will be broken on the course. The number of turns may preclude the breaking of Nazarro's world's record, though there are some of the visiting experts who will not even admit that. The more conservative estimates figure that the winner in the Grand Prize will travel the 400 miles at an average speed of between 68 and 70 miles an hour. Some of the laps they figure may be made at a speed of over 75 miles an hour. Miles of new straightaways have been constructed since the running of the stock car races in March, and turns have been in some cases entirely eliminated. At Isle of Hope the most dangerous series of turns has been done away with; in one case this has been accomplished by a detour through a private park three bad turns were eliminated and one sweeping banked turn substituted. While the number of turns even yet remaining takes away some of the speed of an undoubted remarkably fast course, they add a sporty element which appeals to those who think races of this kind should require the maximum skill from the winning driver, rather than a daredevil recklessness which only needs to cut it loose on a straightaway course. The straightaways with their perfect surface will cut off the seconds added at the turns. DePalma, who has the world's mile track record to his credit, and who has figured considerably in sprint racing, says there is no part of the Ormond-Daytona course which is better than the Ferguson avenue stretch of four miles between Beaulieu and Isle of Hope.

This is a part of the new roads which have been built especially for this race. Thousands have been spent in this road building.

The course for the light car race could not be better. It is a perfect 10-mile rectangle, with all turns scientifically banked, and as level as a billiard table almost. There is no reason why new world's records should not be set up in this race.

Savannah is determined to make an event of the races apart from the contests themselves. Two 20-round fights by well-known pugilists are scheduled for the nights of the two racing days. The following day will be devoted to an airship exhibition and other attractions. The great effort, however, is being concentrated on the successful conduct of the races. The military with almost twice the number used before will be on the job of policing the course. Martial law will prevail as before. Governor Smith, who gave the consent for the use of the troops for the March Stock Car races, has again agreed to proclaim martial law over the course for the two races and order the troops under the same commanders as before to keep the track clear for the racers. In this respect it may not be denied that Savannah has the best record of any other American city which has held road races.

The Savannah Automobile Club proposes to do itself proud in the accommodation of the visitors and the entertainment of its guests. An information bureau will be open at the Union Station to supply visitors with any information desired. The chief work of the office will be to direct applicants to places where they can be accommodated during their stay here. Tabulated information of every hotel, boarding house, and private residence which will receive visitors will be on hand, together with abundant help to make the work successful. The bureau will have telephone lines connected with the various places where visitors will be received so that tab may be kept on their capacity at all times. The club has gone into this feature with the same enthusiasm and the same thoroughness it has tackled

the details of the races and will make just as great a success of it. It is an easy bet that accommodations will be provided for far more visitors than come, though the city expects a record-breaking crowd. It has been arranged to take care of many visitors in dozens of private and Pullman cars on sidings which have been laid adjacent to the grand stand. Special docking places have been arranged for chartered steamships which will come from New York, Philadelphia and Baltimore. Several are already scheduled.

A feature of the races will be the entertainment of the visiting newspaper men. Savannah has a record in the matter of entertaining newspaper men and proposes to keep it up. A recent delegation of visitors from newspaper row in New York is still remembered very pleasantly here, and the entertainment meted



One of the Bridges Over the Course.

out to them will be nothing to compare with the treatment accorded the visitors to the Grand Prize Race. The city started to get its hand in last week when the newspaper men from all over Georgia were invited here and wined and dined and taken over the course. Forty odd of these were in the city at the time and left loud in their praise of the course and promising large delegations from their respective cities to the races.

The arrangement with the Automobile Club of America is that the Savannah Club will have practically all the proceeds from the races. The local club in turn has decided that the proceeds shall be expended in advertising Savannah. They have determined that one of the ways they will expend this money is to give the visiting newspaper men a good time while here. Those who have been here know what this means. The others will have a right good time finding out.

It has been decided to start the light car race of Wednesday at 11 A. M. The Grand Prize event of the following day will start at 8.30 A. M. While these comfortable daylight starts may rob the contests of much of the picturesqueness attendant upon the break-o'-day beginning of the Vanderbilt race, it is fairly good guessing that those who do not care particularly to see the sun rise will be more comfortably satisfied with the later hours.

FROM THE NEW YORK END OF THE RACE.

NEW YORK, Nov. 8.—Of the fourteen foreign drivers engaged to pilot European cars in the Grand Prize Race on Thanksgiving Day, eleven have arrived. The *Kaiserin Augusta Victoria*, which got in on Saturday, had aboard Victor Hemery, Rene Hanriot, and Fritz Earle, the Benz trio; and *La Touraine* on Sunday brought Francois Sisz, of the Renault team. This quartette has joined the contingent already at Savannah, which is made up of Wagner and Nazarro, Fiat; Cagno and Piacenza, Itala; Hautvast and Rigal, Clement-Bayard, and Duray, Lorraine-Dietrich.

Rival importers have different stories to tell of the possibilities of the coming of a pair of Mercedes candidates, scheduled to be driven by Poege and Salzer.

There was some possibility early in the week, according to an A. C. A. press announcement, of there being two additional entries—one of a Buick, the 50-horsepower machine driven by Burman in the Lowell race, and the other a third Renault, a duplicate of this year's Grand Prize models, which had been shipped with the other two Renaults. It was said that Paul LaCroix would make the entry, provided that Renault Frères would furnish a driver. George Robertson in a cable to Mr. LaCroix made application for the mount. The Vanderbilt Cup winner also had a chance of a seat at the wheel of a Panhard now in this country, provided a sale of it was made to a prospective purchaser with Grand Prize aspirations. The Buick was announced on Tuesday as entered.

Leonard Zengle will supplant Cyrus Patschke as pilot of the Acme, the latter being deemed by the company's officials at present a bit too young for such responsibility.

W. Du Cros, of the Dunlop Tire Company, of London, has come over to look after the interests of his company in the race, the two Clement-Bayards and the Lorraine-Dietrich having already contracted for Dunlop equipment.

The Continental Caoutchouc Company has added to its Grand Prize offer of \$4,000, split into \$2,000 for first, \$1,250 for second and \$750 for third, another offer of \$500 for Continental equipment in the light car race—\$250 for first, \$150 for second and \$100 for third.

The latest addition to the prize list comes from the Bosch Magneto Company, which offers \$500 to first, \$250 to second and \$100 to third, provided that the cars in question be equipped with Bosch magnetos.

According to a report from Pottstown, Pa., the six-cylinder Chadwick was recently timed on a four-mile course near Bristol and developed a speed of 111 miles per hour. The excellent showing of the Chadwick in the Vanderbilt will cause it to be most interestingly watched at Savannah, though its makers recognize that they are competing against specially built racers.

Information concerning the Lozier entry is to the effect that it is a regular stock model, with the exception of the motor, which has a 5 3-4 inch bore instead of the regular 5 1-4 inch; the stroke remaining at 5 1-4, the same as in the stock car. It is stated that private time trials on the road near the factory at Plattsburgh, N. Y., have been entirely satisfactory.

Fournier on His Way to America.

A cablegram from Henry Fournier, received Wednesday morning, gave the information that he is on the *Kron Princessen Cecilie*, which means that he will reach New York Tuesday next.

In the early days of automobiling in this country, one of the most prominent figures was this same Fournier, winner of the Paris-Bordeaux and Paris-Berlin races. His American performance of a mile in 51 4-5, driving a Mors on the Coney Island boulevard, remained as the American record until it was beaten by William K. Vanderbilt, Jr., with his mile of 39 4-5 on the Ormond-Daytona beach with a Mercedes.

Fournier is now an Itala pilot, having charge of the French representation for that Italian make. His garage is one of the largest in Paris and is much frequented by Americans. It is needless to say that Fournier can talk to them in their own language, which is a source of great satisfaction to a visitor in foreign parts.

Concerning the Light Car Race.

The three Oldsmobiles entered for the light car race have been withdrawn, F. L. Smith, vice-president of the Olds Motor Works, stating that it was found that they could not be prepared in time.

A third Chalmers-Detroit has been nominated by W. T. Bryson, the Savannah agent. It will be driven by Burns.

The Gregoire and the S. P. O., two of the European entries, are on *La Savoie*, due here next Saturday. The latter has 95.4 mm. more and 130 mm. stroke. Juhaz, an Hungarian-American, will be its pilot.

The Lancia light car racer is also on *La Savoie*. There arrived Wednesday, however, a standard Lancia runabout, which will also be shipped to Savannah. W. M. Hilliard and his crew left for the course on Tuesday, taking with them the Lancia which competed in the Sweepstakes, so that the Hol-Tan camp will have three cars at its disposal. Perhaps of the racing reputation of its builder much is expected of the Lancia.



The Work of Unloading the Foreign Racing Craft Upon Their Arrival at Savannah.

FORECAST OF WHAT FRENCH MAKERS WILL EXHIBIT

By W. F. BRADLEY.

PARIS, Nov. 5.—It will be a rather more modest Salon than usual that President Fallières will throw open to the public on the morning of November 28. After the ultra-voluptuous decennial, the organizers have decided on an economical exhibition, and though the show has no difficulty in holding its unique position as a fashionable spectacular display, the light of the eleventh annual will be dim in comparison with that of the tenth show. The decision to hold an economical show meant the abandonment of the temporary building on the Esplanade des Invalides and the splitting up of the Salon into two distinct exhibitions, the first devoted to pleasure cars, the second to all commercial applications of the automobile.

Paris, with all its advantages, has no hall large enough for the housing of the most important trade exhibition of the country. It is true that the Galerie des Machines is empty, but the Salon organizers are artists who would as soon think of draping the Champs Elysées in black as housing their polished chassis in the monster steel and glass house on the Champ de Mars. Consequently pleasure cars will occupy their usual palatial hall November 28 to December 13, and eleven days later the doors of the same hall will be flung open to an exhibition of machine tools, gas engines, marine engines, stationary power plants, commercial vehicles—in fact, every branch of the automobile excepting the pleasure vehicle.

Decorations will be modest—comparatively. This, however, will not prevent the organizers spending more than any other body holding an auto show; but the difference between 1908 and previous years is that individual exhibitors, instead of being encouraged to adorn their stands with fine metal work, crystal, and gold paint, will be asked to refrain, and unlike previous years, will receive no special mention or award if they spend several thousand dollars on triumphal arches.

Feature Will Be Attention to Small Cars.

The distinctive feature of the Salon will be the attention paid by large firms to the production of small, low-powered, moderate-priced touring cars, runabouts and taximeter cabs. In previous years small firms and newcomers to the industry filled the small car class, the world-renowned firms being still too busy with rich customers to pay any attention to the man of moderate means. There are a large number of small firms and a few big ones that have tackled the problem of presenting a satisfactory two-passenger runabout with a single or two-cylinder engine at a maximum of \$1,000. Several of them get as low as \$800 for a one-lunger carrying a couple of passengers, but with two exceptions these are small, unknown firms.

The big houses are interested in the light touring car or runabout from \$1,000 to \$1,800 and, almost without exception have gone into this branch of the business with a set of cars which, although the most remarkable feature of the European industry, are altogether unknown to America, the heavy customs duty keeping them out.

Thus Renault has brought forth a two-cylinder 8-10-horsepower, two-passenger runabout. Such a move on the part of the Billancourt firm is not surprising, for while building a car de luxe, they have never neglected the small fry. The new model has an engine with two vertical cylinders in one casting measuring



Clement Dirigible Sailing Over the Church of the Madeleine, Paris.

75 by 120 bore and stroke, differing only in a few details from those in service all over the world on taxicabs. The only important change apart from dimensions is that in place of three-quarter elliptic springs at the rear semi-elliptics are used. The motor has the oil level regulator fitted for the first time on the large cars this year, and of course high-tension magneto. Anything short of a motor bicycle without a magneto is looked upon as a hybrid nowadays.

In addition to this little car and all their usual models with only detail modifications, Renault Frères will produce a couple of specially light models of 29-30 and 35-45-horsepower respectively intended for fast work with low-tire consumption. Excepting a rather more compact power plant, a more inclined steering column, and a special gear box, the cars will be modeled after the usual series with all parts lightened. Comfortable closed bodies can be fitted, but they must be lighter than usual.

The aeronautical engine has undergone some changes since it was first brought out, but will now be presented in a definite form. Instead of a fan at each end of the sheet metal housing enclosing the motor, there is but one at the forward end, the current on being drawn in being deflected towards the engine base, passing round all the exhaust pipes, the lubricator pipes, and finally on the exhaust box carried longitudinally under the engine base. The aerial propeller is mounted on the camshaft instead of the crankshaft, thus getting a slower speed without the necessity of special gearing.

Brasier, Dietrich, C. G. V. (now Charron Limited), Panhard, and Berliet, all firms that have been conspicuous in the development of the powerful and costly type of car, have each brought out a little two-cylinder model, of not more than 12-horsepower, equipped with a runabout, touring car or taxicab body.

Details of One Concern's "Two."

Brasier's "two" is practically a simplified and reduced model of his large cars, the engine being a vertical one of 102 by 120 millimeters, valves on one side, with Brasier carburettor, and Bosch high-tension magneto. Water circulation is by thermosiphon, with fan behind the radiator, and lubrication by gear-driven pump. A leather-faced cone clutch transmits the power from the engine to the gear box, and connection to the rear wheels is by propeller shaft and live axle. Suspension, as in practically all these small models, is by three-quarter elliptics rear and semi-elliptics in front. In addition to this model there will be one on somewhat similar lines with a four-cylinder engine in one casting, horsepower being about 15. Low-tension magneto on the Brasier, as on a very large number of important European makes, has had to give way to the high-tension type. As the high-tension installation is never accomplished by a reserve ignition, there must be distinctive advantages to account for this wholesale abandonment of the low-tension system.

Dietrich, who has always used chain drive and low-tension magneto, will next year have seven distinct models on three of which the drive will be by propeller shaft and the spark from a high-tension magneto.

Charron has entered thoroughly into the small car business with two rather original models, one having a couple of cylinders, the other four, both in a single casting. In each case bore and

stroke is 3.1 by 4.7, and on both models the radiator is placed on the dashboard, behind the engine, with circulation by thermosiphon. Accessibility, interchangeability and simplicity have been very closely studied with remarkable results. The gear shifting lever passes direct into the three-speed box, running gear and road wheel brakes are interchangeable, as are also the inlet and outlet water pipes. Suspension is by three-quarter elliptics at the rear, and of course the armored wood frame has been abandoned. It is rumored that on the large models there will be a new device giving direct drive on all four speeds; no official confirmation of this can be obtained, however.

Panhard has a two-cylinder model in hand, but is not inclined to talk about it at present. The novelty of the pioneer firm, however, will be the adoption of the Knight silent engine, invented by Charles V. Knight, and built for several years by Knight & Kilbourne, of Chicago. Daimler, of England, has taken up the patents and will apply them to all 1909 models, while Minerva will do the same in Belgium. The Panhard firm refuses to divulge its intentions and even declares officially that it will have nothing new at the Salon. But as the Knight engine has been under test for the last six months, it is more than

the adoption of a mechanically driven Dubrulle lubricator operated off the camshaft, in place of the pressure-fed lubricator at present employed. The changes of the cab chassis apply also to the smaller touring cars, with the exception that there is no universal joint between the clutch and the gear box. Three-quarter elliptic springs will be used for the rear suspension of all models, and the change speed lever under the steering wheel will be abandoned on all but the voituresses.

Mercedes follows the general line of motor evolution by producing a shaft-driven model for 1909, the engine of which will be a four-cylinder of 3.5 by 4.7 bore and stroke. Ignition is by Eiseman high-tension magneto, valves are on opposite sides, and cooling is by honeycomb radiator. Four speeds are provided by the selective type of gearbox, with direct drive on the fourth. A couple of torque rods lead from the universal joint casing to points on the rear live axle near to the road wheels; the differential gear is in the same plane as the propeller shaft, the drive being by double bevel gear.

Six-cylinder models will be shown, but they will probably be less in numbers than at any previous exhibition. The six-cylinder engine never really caught on among Continental automobilists, and now that fashion has turned toward lighter and low-powered machines there is less demand than ever for more than four cylinders.

In brief the tendency of 1909 will be towards light four-cylinder touring cars, with bloc casting for the smaller models; high-tension ignition by magneto only for all but the largest cars; water circulation by thermosiphon below 15-horsepower; gear-driven lubricators on all models; shaft drive on all but the largest models; suspension by three-quarter elliptics on all models.

Marine and Aero Motors.

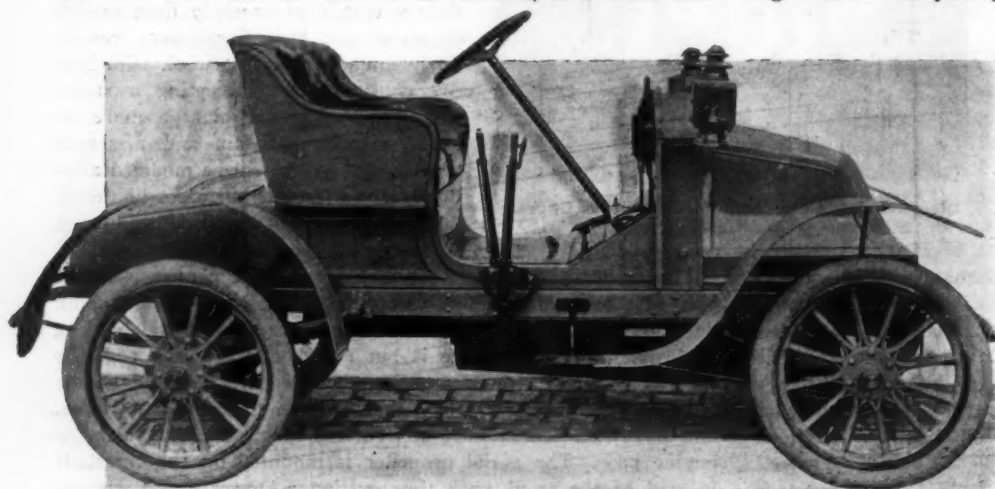
At the industrial show special attention will be paid to the development of the marine motor, a large

official stand has been secured with the object of pointing out to constructors the possibilities of business in the application of internal combustion motors to fishing boats and the various type of pleasure craft. It is not likely, however, that very much of interest will be shown on the stands.

In the aeronautical section there will doubtless be some interesting exhibits. Most of the leading constructors have devoted attention to the production of engines for aeroplane work.

Clement's Essay Into Aeronautics.

PARIS, Nov. 5.—Adolphe Clement, millionaire automobile constructor and head of the great factory on the banks of the Seine, has met with unusual success on his entry into aerial navigation. After several months' quiet serious work the mechanical portion of the world's finest airship was produced from the Clement-Bayard factory simultaneously with the completion of the balloon part at the Astra works. The two parts were connected, and as a trial trip the *Clement-Bayard* soared over Paris, making stoppages and performing evolutions at the most important centers, then passed over the owner's automobile factory and the one owned by his son-in-law, Ferdinand Charron. For the second outing a record journey of 160 miles was made in five hours. The *Clement-Bayard* is constructed on the same general lines as the *Ville de Paris*, and is without doubt one of the fastest airships in existence. The gas bag was made of material furnished by the Continental Tire Company, and is of two distinct portions. The power plant consists of a Clement-Bayard racing engine, with four cylinders, developing 120 horsepower, and driving a huge two-bladed propeller at the forward end of the steel cage.



Renault Two-cylinder Runabout, to Be Shown at the Paris Salon.

probable that the patent will be applied to at least some of the 1909 models. Fiat is declared to have the same patents under consideration for Italy.

Berliet, who up to quite recently had nothing smaller than a 25-horsepower machine will have a two-cylinder shaft-driven car of 8-9-horsepower, a four-cylinder 15-horsepower model with shaft drive, and a 22-horsepower with the same characteristics. Low-tension magneto is abandoned for the high-tension type, and a new system of force feed lubrication is adopted to all models with the exception of the 60-horsepower four-cylinder.

Itala Changes from Low to High Tension.

Itala also has changed over from low-tension to high-tension magneto on all models, including the four-cylinder 14-20-horsepower light chassis intended for a town vehicle or light touring car. Isotta-Fraschini will be in the light car business with a small four-cylinder having engine in one casting, and final drive by cardan shaft.

Darracq has a series that varies from a one-lunger voituress selling at \$700, complete with two-passenger body, to a six-cylinder extra long chassis at \$3,200, Paris prices. The gear box on the rear axle, which is a feature of the taxicabs now in use in New York, is a thing of the past so far as Darracq is concerned. The new cabs will have their three-speed gear box mounted on the subframe, immediately behind the cone clutch and connected to it by a short shaft and universal joint. The clutch spring is within the forward end of the gear box, contained within a sleeve directly acted upon by the clutch pedal. Special provision has been provided against the leakage of grease out of the gear box. Lubrication has been improved by

ABOUT AUTOMOBILE SPRING SUSPENSIONS*

By THOS. J. FAY, PRESIDENT SOCIETY OF AUTOMOBILE ENGINEERS.

LIFE of a spring is forecast by the maker thereof, almost independently of the quality of the material. If the spring is limber and it is so placed as to indicate spring play, just at the point of reversals of camber, the life will be shortened. The superior grades of materials will stand this abuse for a comparatively long time, but the dynamic life of steel, like the life of every other animated thing, is limited. Inferior materials, advantageously situated, might last far longer than the superior products working at a disadvantage. The initial camber to give a spring for a given static camber, is a problem for the spring maker.

Figs. 8, 9 and 10 show three views of a given spring, under the conditions as follows:

- (a) The spring under static load, indicating the static camber;
- (b) straightened out under load;
- (c) in reverse camber, in a testing machine, to the limit before permanent set.

It is worth while to study these three conditions in relation to springs, because they have to do with the life of the spring in service, and the easy riding qualities of the car due to spring action. It might be said in general that the greater the difference between the initial and the static camber, the more pronounced will be the easy riding qualities, and it might be said as well that the greater the initial camber and the greater the possible reverse camber, the better will be the life of the springs, especially if we take into account that the spring action in service will be limited

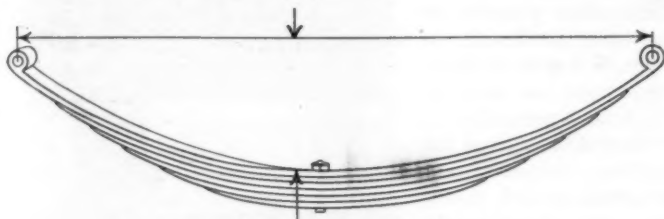


Fig. 8—(a) The spring under static load.

between the two points, as represented by the initial camber on the one hand and the condition (b), which means that the spring leaves will no more than straighten out in actual service. If the service conditions are such as to eliminate any reversal of camber, then it may be said the factor of safety will be represented by the amount of the reverse camber in a testing machine before permanent set.

If springs are limited in their applications to the conditions as before given, even though these conditions may be regarded as favorable, it may still be said of the springs that their life is limited. The life, in fact, under a fixed set of conditions, will depend entirely upon the kinetic ability of the materials used (dynamic qualities of the steel). This is a matter that has been exploited at some length in the press and on the marts of steel, but to almost no purpose, since, forsooth, springs do break and the breakages are not limited to the kind that are cheap and claimed to be non-dynamic in their character.

At the present time every particle of steel that goes into every automobile, regardless of price, is said to be of a dynamic character and toughened by a "special process" whether it is or not. It is rather to be feared then that this word "dynamic" has been relegated to a low estate. Notwithstanding the apparent tendency to class everything by way of steel that finds its way into cars as the very best obtainable, the fact remains that some of the material is truly good, and when it comes to the material for springs, which is the affair of the hour, kinetic qualities are those desired, if the life of the springs shall be long, provided the easy riding qualities are present in the spring suspension. This must be so,

since, as before stated, easy riding qualities are present if the steel is subjected to a fiber strain not far from the elastic limit, and so it follows that steel flexed repeatedly and continuously, under conditions nearly approaching the elastic limit, will not last long unless it is of a character extremely kinetic.

The exact physical properties of the several grades of steel will be accorded a due measure of attention in connection with the part of this article specifically dealing with materials. For the



Fig. 9—(b) The spring straightened out under load.

present it will be well to consider one or two other points. For instance, a laminated spring of the flat plate variety must be so designed that each one of the leaves, regardless of their lengths, will be subjected to exactly the same fiber strain as its neighbor for the respective conditions of camber. This is rarely absolutely true, and the conditions here imposed are oftentimes violated, proof of which lies in the fact that plates will break out of the middle of a spring and the spring will work better without the broken plate than it ever did before. This merely illustrates the fact that the broken plate was doing nearly all the work and served for the most part as a mischief maker, merely because the broken plate was given a greater initial camber than the occasion demanded. Mathematically and in practice, if the spring plates are all of the same thickness they should all be bowed to the same radius, and if they are so bowed the fiber strain will be the same in all for every condition of camber to which they are all treated.

It is easy enough in practice to fix the initial camber for the various lengths of plates, if they are all of the same thickness, since they can all pass through the same bending roll, if they are all to be of the same radius. This is not to say that the best springs will come from the practice of making all of the leaves the one thickness, since it would be possible to get more work out of the springs were the leaves decreasing in thickness as they shorten. With decreasing thickness of leaves we may have increasing camber as they shorten, hence increasing pressure and greater work. It may not be generally understood, and it may be well to point out, that the efficiency of a spring is measured by its ability to transform energy. This was intimated in the entering chapter, but we can go a little farther and say that the spring action is even at the expense of the power of the motor,

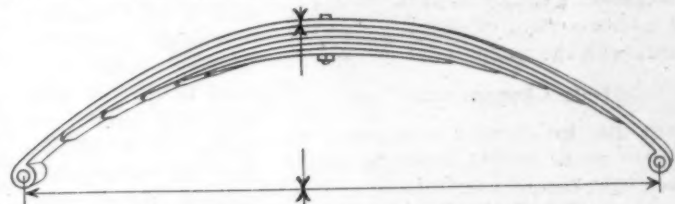


Fig. 10—(c) Reversal of camber to point of set.

and the more power the springs will absorb the easier will be the riding qualities of the springs. What is wanted in a spring is the ability to destroy the energy of the moving mass insofar as it can, by way of defeating easy riding qualities. We do not wish to have this energy destroyed instantly, but rather at an increasing rate for each increment of travel. We accomplish this more perfectly if the spring plates are made thin as they are made short.

There is no actual limit to any type of spring, from the mere point of view incidental to indifferent service; if, however, easy riding qualities are desired, or, if spring failures are to be eliminated, it is then that limitations of the types will have to be

*Continued from page 638 of The Automobile, November 5.

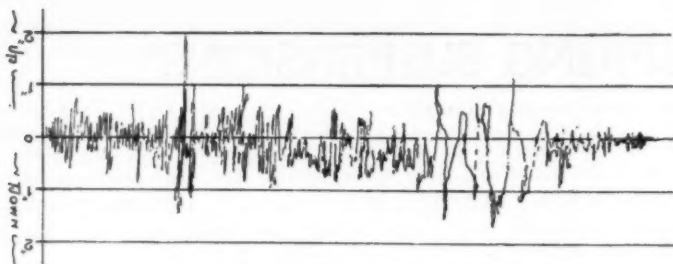


Fig. 11—Showing record of bumpometer test.

considered. Take, for instance, the helical spring, placed in such a way as to take care of the vertical bounce of the body, and it is plain to be seen the spring may snub the load within the required limits of travel, but the pendulum action will be at a high periodicity. Obviously, it would be disagreeable riding under such conditions, because the number of oscillations of the body would be very high indeed. It was found in practice that this very low priced and practically unbreakable type of spring could not be utilized, because it engendered extremely disagreeable motions.

The concord type of spring (used extensively in connection with the little Oldsmobile), known in the Far West as the "buckboard type," is probably the most easy riding spring extant. It has always been used in connection with short wheelbase vehicles, and its limitation is that due to wheelbase. The successful application of this type of spring has nearly always been in connection with vehicles of a wheelbase not exceeding 72 inches, and now that automobiles, even of the runabout type, are designed with the wheelbase considerably exceeding 72 inches in nearly every case, this type has become almost obsolete.

In the cars of the time it is a question of laminated plate springs, full, three-quarter, or half elliptical, as the exigencies of the service would seem to demand. Designers split on these differences, and some designers resort to the scroll as a further means of engendering easy riding qualities. The author has had occasion to observe road performance in automobiles in connection with racing cars and as this road performance relates to the



Fig. 12—Fracture of Krupp steel in a test, showing long fiber.

more important types of touring cars, these observations have invariably resulted in the conclusion that full elliptical (rear) springs, with a scroll top section and rather stiff lower section, would more nearly afford a level platform than might be obtained in any other way. Next to the full elliptical (top scroll) rear spring, it is possible that the three-quarter elliptical (scroll quarter) would afford more nearly the perfection desired. Unfortunately, these types of springs do not readily lend themselves to the design of cars, if a low center of gravity is

sought, and certainly a low center of gravity is of the utmost importance.

From the point of view of types of spring, the tendency may be to disregard the condition of service, and regard the type as dominant. It is not absolutely necessary to resort to the use of full or three-quarter elliptical rear springs, because the application

of skill will render it possible to obtain easy riding qualities with the half elliptical springs in the rear in connection with cars with a low center of gravity and devoid of over much top hamper. The question of where the weight is placed is quite as important as the result of the center of gravity. For instance, in limousine the resolved center of gravity can be low enough to escape criticism; even so, a considerable proportion of the weight can be concentrated high above the base line, and that proportion of the weight will be in evidence, by way of excessive "heel" when the car is doing a curve. Flywheels, for instance, have their weights concentrated at the rims, because the flywheel effect is the maximum under such conditions, but the center of gravity of a flywheel, if it is kinetically balanced, will be at axis of rotation. This same phenomenon can creep into body work, and it is plain that center of gravity is not all to be watched.

The spring performance will only be up to the springs as a matter of design, if the design of the car as a whole will render it possible to take advantage of the good qualities of springs. Under proper conditions the half elliptical type of spring will afford easy riding qualities, and a periodicity of the oscillations said to be agreeable by even the most fastidious. A modification of the half elliptical spring is that known as the platform type of spring, in which, in addition to the two half elliptical springs in the fore and aft plane, a third half elliptical member is placed in a lateral position, suspended from the after end of the two half elliptical members above referred to.

If top hamper causes lateral heeling in connection with the half elliptical springs, except in an ordinary way, this disagreeable property is far more noticeable in connection with the platform type of springs. The body is suspended to the lateral member of the platform members, and the spring action is therefore that which would engender lateral rolling if very much of the total weight is above the chassis frame. On the

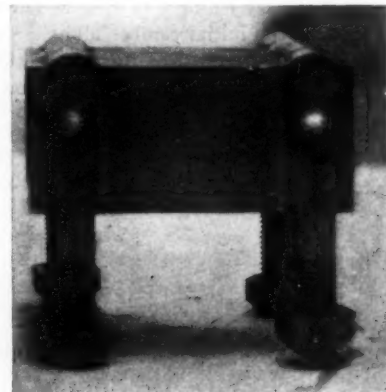


Fig. 13—A secure spring clamp.

other hand, platform springs when properly designed and suitably placed, afford the very easy riding so much to be desired in connection with the road performance of automobiles.

Up to the present time we have made no mention of the spring suspension at the front end of cars. At the front end the problem is different, because there the load is almost constant. If the motor is placed in the front the load will be scarcely varied at all, due to the presence or not of another person besides the chauffeur in the remaining front seat. With the motor in front the chauffeur's position is so far back in the direction of the rear spring suspension that the difference of one person but little affects the weight actually resting upon the front springs. In front, then, it is very possible to take advantage of the half elliptical type of springs, since they lend themselves perfectly in every case, if only the weight is constant and the springs are designed taking that weight into account. In a very few cases the three-quarter elliptical springs have been used in front, and, while there is no great objection to the use of this type of spring under the conditions involving a constant load, there is a probable increase in cost to take into account, and *an expenditure can scarcely be justified in anything unless in connection therewith an advantage is afforded.*

There are types of springs that combine the regular functions, with special features, perpetuating the shock absorber idea. These springs will be illustrated in connection with shock absorbers, and since they are normal products from the spring point of view, they will not be given space here.

THINGS AN AMATEUR DRIVER SHOULD KNOW

By A. D. HARD, M. D.

IN the Middle States and in the Great Northwest, the number of automobile drivers who are owners of their cars is increasing very fast. The so called "middle class" are now buying automobiles with a rush, and the output of the manufacturers is an index of the nature of the market. The four-cylinder touring car of from 20 to 30-horsepower is in demand by people who will drive their own cars, and the sale of them will be immense. One of the great objections to the purchase of an automobile has been the prospective expense of a chauffeur.

The man who can easily write out his cheque for thousands in payment for a car that his wife asked him at the breakfast table to buy, expects to employ a chauffeur and does not care to become familiar with the mechanism of his car. But the man who has to worry some to get together the twelve hundred dollars or so with which to buy a car, must drive it himself, and must know his car.

Learn the Carbureter Thoroughly.

There are some very simple things involved in the structure of an automobile that are seldom considered or understood, and yet they are of prime importance to one who is to drive his own car. Carbureter construction and the reasons therefor are not often studied, and yet the carbureter is the heart of the automobile.

The large number of designs, all calculated to accomplish the same purpose, shows conclusively that the men who study this matter are not settled upon the best mechanism for feeding fuel to the combustion motor. We all know that we wish to get a uniform mixture at all speeds which will give the greatest power and least waste of energy in the form of heat that is possible. The driver should know how his carbureter is calculated to work to accomplish this purpose so that he may intelligently adjust it as may be required, and know what to do when it fails to work properly.

The in-rushing air produces a spray from the discharge nipple very much like that from a common atomizer used in medicine. The fine particles of gasoline are thus brought in contact with the air in a favorable way to be rapidly converted into vapor, and this vapor mixing with the air produces the explosive or combustible mixture.

If the Discharge is Too Free.

If the discharge of spray from the gasoline nozzle is too free, the particles will not be all vaporized, and will be deposited on the inner walls of the intake pipe as liquid gasoline, and the portion which enters the combustion chambers of the motor will be vaporized by contact with hot surfaces, and a too rich mixture will be formed to readily ignite or to give the best discharge of energy.

If it does ignite under these conditions, it only partially changes to an elastic gas having a much larger volume, because there is not enough oxygen at hand to furnish the carbon atoms with their required portion. The results will consist of lack of power, production of black carbon laden smoke, and fouling of the cylinders, all undesirable and easily avoided if we know how to meet the condition.

It is well that we should understand that all substances are composed of unit particles called molecules, and the relative nearness to each other of these molecules determines whether the substance is solid, liquid, or gaseous.

If a gas be compressed so that the molecules come in contact, the substance will no longer be a gas, but will take either a solid or liquid form.

If the molecules of a combustible gas be compressed until they are much nearer together than in the natural state, but not near enough to become a liquid, they ignite much more rapidly than before, because combustion heat can more readily pass from one molecule to another. Not only will they ignite quicker, but the

liberation of energy will be greater in volume, and this is the reason we demand compression in the cylinders of a combustion motor.

One of the incidental features of this compression is greater facility for the ignition spark to follow other paths than the spark gap of the spark plug. This is an undesirable feature, and must be taken into consideration in securing perfect ignition of the combustion charge in the cylinder.

Trying the spark on the outside of the cylinder with no compression to influence it is not a correct exposition of its efficiency in producing desired results in the cylinder. It may spark beautifully when under observation, but when returned to the cylinder no perfect result may be attained.

The fault is usually due to the spark points of the plug being too far apart for anything but outside explosions. The points should be placed as close together as possible without being liable to fouling by small particles of carbon. Closeness of points not only favors production of sparks under compression, but it interposes less resistance to the current passing across the gap, and thus makes it less liable to follow some other track, with absence of the ignition spark.

Adjustment of the Vibrator.

The adjustment of the vibrator on the spark coil is always a matter of various ideas. The principle involved is that the primary current must be made and broken *completely* in rapid succession.

If it is so adjusted that when the points are apart there is still a flow of current from small particles between them, the indication is to *increase* the distance. If the points are in this close condition which favors a leak across the gap, the battery will be partially short circuited, and dry cells or storage battery will quickly lose their charge.

This is the explanation of much of the fault finding of those whose batteries quickly give out. They think that if the buzzer does not buzz they do not need to turn off the switch when the car is not in use. And, furthermore, the current is continuous to some extent when the car is in use, when it should be perfectly intermittent.

These three points of adjustment are of prime importance in knowing how to run an automobile. The fuel discharge from the carbureter nozzle, the points of the spark plug, and the points of the vibrator.

It is a mistake for a driver to ever try to correct an apparent fault in a coil. There are no reasons for a coil to refuse to work that can be remedied by an ordinary mechanic, except it be some outside connection. If the coil is so that a current will not pass through it, either the primary or secondary part, it is always due to burning out, and calls for a new coil at once.

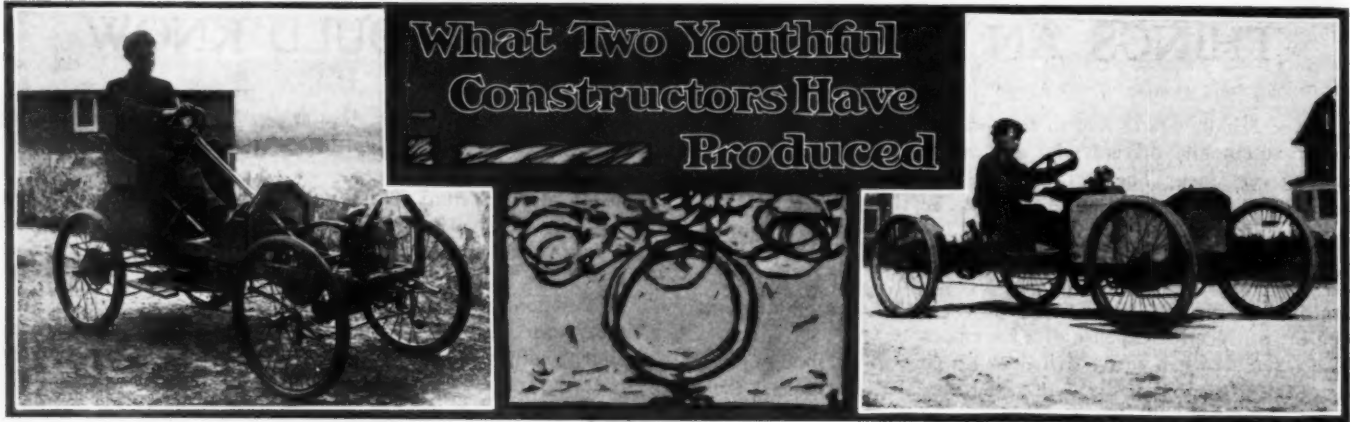
In the correction of all automobile faults, the greatest and most common error is in not properly locating the trouble before trying to correct it. Indiscriminate and misdirected changing usually gets farther away from the correct condition than at the beginning, and makes the job more difficult for even an expert.

When the Motor Gets Lazy

It is high time to look for the cause. It may be for no great reason, but lack of lubricating oil in the crankcase is a serious matter and oftentimes it is just this absence of oil that is at the seat of the trouble.

If the matter is not attended to on time and the motor stalls, it will be well to "crank" until the bearings cool down. If the bearings are allowed to "freeze" the trouble—for a road problem—will be beyond the ingenuity of the average autoist.

Sometimes it is kerosene oil—put into the cylinders—that seeps back into the crankcase, and kills the lubricating qualities of the crankcase lubricant. In such an event to drain off the oil and replace it with a fresh supply is the natural thing to do.



C. A. Byers in His Home-made Car.

H. L. Gray and the Steamer He Built.

WHAT A YOUNG CALIFORNIAN HAS BUILT.

Editor THE AUTOMOBILE:

[1,621.]-Brice Cowan, fifteen years of age, of Los Angeles, Cal., is probably the youngest automobile manufacturer in the world. At least, it is a safe wager that no other boy of his age, handicapped at the start by the lack of mechanical training, as he was, has built, unassisted, an automobile that for speed, hill-climbing, and all other purposes is a greater marvel than the one recently completed by this Los Angeles youth. He began working on the machine about eighteen months ago, at which time he was only a few months past fourteen years of age. He had had no mechanical training of any kind, and, consequently, many discouragements were his first rewards. His persevering nature at length won, however, and with a real automobile of his own make, which he calls the "California Midget," he is the envy of all the boys.

The "Midget" in general design somewhat resembles the large factory-made touring cars, although of miniature proportions. It is six feet in length and weighs about 300 pounds. It has an Aster engine of three-horsepower, and is capable of making a speed of from 25 to 30 miles per hour. It has a friction transmission and a double chain drive, is air-cooled, the battery control is through an electric light switch, and the differential operates successfully. It has a tread of three feet, and has external brakes on the rear wheels. It carries two gallons of gasoline and will run 25 miles on each gallon.

Only his spare time was devoted to the construction of the "Midget." The entire machine, except the engine, including even the wheels, is of the boy's workmanship. The materials and engine cost about \$150, all of which was earned by the youthful builder.

CHARLES ALMA BYERS.

Los Angeles, Cal.

TIMING TROUBLES WITH A 6-CYLINDER MOTOR

Editor THE AUTOMOBILE:

[1,622.]-As I am a reader of The Automobile and have a six-cylinder machine,

How do you time a six-cylinder motor when they fire 1-5, 3-6, 2-4?
Buffalo, N. Y. READER.

With the idea of being sufficiently explicit, attention will be called to the mean average valve timings as set down in the translation by C. B. Hayward (THE AUTOMOBILE, Nov. 5, 1908, page 649), as follows:

	Mean Av'ge.
Lead given the exhaust valve.....	46° 20'
Lag in closing inlet valve.....	25° 32'
Advance of the ignition.....	31° 15'
Lag in closing exhaust valve.....	5° 8'
Lag in opening inlet valve.....	12° 16'

Having in mind correct timing for the first cylinder incidentally fixing the range of the spark advance to give late firing and cranking, and the balance of the range (all possibles) to go for early ignition. With the first cylinder timed as to lost motion of tappets and ignition, crank to number five and go through the same operation; thence to number three and repeat the operation; likewise to number six, two, and four, respectively repeating the timing operation as you go along. In other words, proceed as in the order of firing, treating each cylinder as if it were a single cycle motor.

THE STEAM CAR OF NEW YORK CITY BOY.

Editor THE AUTOMOBILE:

[1,623.]-I enclose photograph and short description of a machine I constructed during my vacation, thinking the same might prove of interest to some of your young readers.

The power plant consists of a 31-2-horsepower, two-cylinder, double-acting steam engine, with a bore of 21-2 inches and a stroke of 31-2 inches. This engine is supplied with steam by a 14-inch fire tube boiler heated by a burner, using either gasoline or kerosene. The boiler is placed under the hood and between it and the dashboard is the water tank, which holds six gallons.

The engine is located under the seat in a horizontal position with the cylinders forward, and is connected to the rear axle by a short chain. The gasoline tank is in the rear and holds three gallons.

The frame is made of angle iron braced by truss rods. My front springs are three-quarter elliptic and my rear springs are one-quarter elliptic. The wheelbase is 78 inches, and the tread is 44 inches. The wheels are 28 by 11-2, wire wheels, the front ones being slightly dished. I use one-wheel drive to avoid the necessity of a differential. I carry between 150 and 200 pounds steam pressure. The gear ratio between my engine and my rear axle is 11-6 to 1, which makes it a fast little car.

I can make between 25 and 30 miles per hour. Even with this high gearing, it has sufficient power to carry three persons, and is a good hill-climber. I reverse by reversing my engine.

New York City.

H. LIGGETT GRAY.

P. S.—I am fourteen years old.

THAT TROUBLE OF THE MAN FROM DULUTH.

Editor THE AUTOMOBILE:

[1,624.]-I believe the contributor of letter No. 1,601 from Duluth will find his difficulty in a short circuit; i.e., when No. 1 is firing, No. 2 is doing likewise, or something similar to that.

Worcester, Mass.

P. W. WOOD, JR.

Editor THE AUTOMOBILE:

[1,625.]-In re letter No. 1,001, issue October 29, "Puzzling Knock When Climbing on the High," "Subscriber's" trouble seems to be in improper carburetor adjustment for low piston speeds. Undoubtedly his trouble disappears when he drops back into second speed and the motor runs faster. If there is anything wrong with the transmission (i.e., everything from clutch to rear wheels), it probably is as noticeable in second speed as when driving "in the high." The carburetor on "Subscriber's" car is probably adjusted properly for normal and high piston speeds and when he attempts to negotiate a grade on the high, and the motor slows down, the partial vacuum caused by the downward stroke of the piston is insufficient to aspirate the necessary gasoline from the spray nozzle for a good mixture, causing the "very weak or about half as strong explosion" he mentions. Of what benefit is a wide-open throttle if the needle valve on the carburetor is not open enough?

Hope this will enable him to "value the car \$200 higher."

New York City.

D. C. H.

Editor THE AUTOMOBILE:

[1,626.]-Replying to my own letter, No. 1,601, I am pleased to state the cause of this kick. It was caused, apparently, by a weak explosion. The car was equipped with Schebler D carburetor made for the car. After spending about \$100 at everything else, the D carburetor was replaced with an E special, of the same make, as an experiment. Result: twenty more power, and will pull till dead without a miss. Why the D carburetor failed I know not.

Duluth, Minn.

SUBSCRIBER.

LETTERS INTERESTING AND INSTRUCTIVE

ONE CARBURETER SHOULD DO THE WORK.

Editor THE AUTOMOBILE:

[1,627.]—I find your letters so very instructive that I write to see if anyone can give me an idea as to why my two-cylinder opposed Apperson engine will keep missing explosions after I have tried everything on earth to overcome it. Now, to be sure it was not the spark at fault, I went all over the wiring and changed it to almost new wire throughout, and so I am certain that it is not the wiring, the batteries, or spark. I put heavy rubber hose over the secondary wire to make sure. I use two Schebler carbureters and have taken them off and cleaned them thoroughly, and also took out the intake valves and put in new springs with the same tension. So this ought to be O. K. I have tried every adjustment possible in the carbureters, even from a lean to a very rich mixture; even adjusted them singly, while only one cylinder was running; then let the two run, and tried all ways of adjusting.

The strange part of the deal is that each cylinder, running singly or alone while I hold down the other vibrator, will not miss at all, and at any speed. But just as soon as I let up on the spring and allow both cylinders to fire, then it commences to miss, and will keep it up for an all day's run, but will not miss as bad when running on the road with throttle full open, but still misses a good deal. The above usually would show lean mixture, but in this instance it seems not to be the case, as I have tried it with a mixture



Mr. Lane in His Apperson Equipped with Two Carbureters.

so rich the water would boil in five or six miles and still the engine would miss. Now, the above is a sticker for us all here, and I am very anxious to know what causes it. If anyone has ever had a like trouble, I wish they would give us their experience with it and the cure. The very strange part of it is why each cylinder will run so good singly, and, then, as soon as both are turned on, they miss, and it does not seem to be one all the time missing, but both seem to miss.

V. R. LANE.

West Liberty, Ia.

The writer experienced the same kind of trouble and shook it off in the following manner:

- (a) Removed a defective timer.
 - (b) Removed one carbureter and arranged the remaining carbureter below the motor and with equal length of intake piping to respective cylinders.
 - (c) Made sure of the battery.
 - (d) Replaced the coil with a good one, using a master vibrator.
- Result: the performance is thoroughly good in every way.

COMPOSITION FOR COATING BRASS.

Editor THE AUTOMOBILE:

[1,628.]—Please let me know what the best composition is for coating brass to be put away for the winter. W. K. BAYLESS.
Lexington, Ky.

Lacquer would, of course, be fine; beeswax is good; cylinder (a pure mineral) oil might do. There is still one other way of preventing bright work from taking on a heavy black coat that is difficult to remove, besides destroying the highly polished surface. Saturate cheesecloth with clarified light mineral oil and wrap the parts in the same, or the cloth around the parts.

CHARACTERISTIC BEHAVIOR OF ELEMENTS.

Editor THE AUTOMOBILE:

[1,629.]—Will you kindly let me know the formulæ for H and O for the best combustion in an explosive engine? Can you give me any idea of how many pounds of water would be required to operate the average 20-horsepower gasoline engine giving 20 horsepower, if it were possible to decompose water for this purpose?

If it were possible to decompose water by passing it through red hot pipes, what would happen to the H and O? Would they both come out fixed gases? Or would the O form an oxide with the iron and be consumed? What proportion of air would be necessary to be mixed with the H to form an explosive mixture? Not taking into account the cost of decomposing the water, do you think it possible to get the correct mixture for an engine in this way? At what degree of heat is H and O decomposed?

In burning H in the open air would a hotter fire be the result, with air under pressure? If so, about what pressure? If by burning a pint of kerosene per hour it were possible to completely vaporize one gallon of kerosene, ready for mixture with the air for an explosive mixture, and by a neat little device which could be placed under the hood of an automobile alongside of the engine, do you consider such a device would help bring kerosene into use in explosive engines? Or are all manufacturers satisfied with gasoline, and the present system of vaporizing?

H. T. E.

Nyack-on-Hudson, N. Y.

Confining a mixture to H and O, the product of combustion would be water, the formulæ for which is H_2O . The value of the second question is not apparent; water is in a state of finality, as respects the relations of the components. You would have to use coal and an electrolytic process to split the water into its components; you might better use the coal direct.

Water, in contact with a red hot pipe, makes steam. This steam, separated from any water, superimposes a superheated state. Superheated steam is not a permanent gas. Not considering the final effect of superheating steam from a point of view of the separation of the components, it is enough to say that a point is first arrived at under the conditions in which the steam ceases to be valuable for power purposes. In steam automobile practice, and in recognition of this fact, the pressure is kept below 600 pounds per square inch.

Obviously the components of water are hydrogen and oxygen. These elements, isolated, are in gas form, and in a state of finality; hence they are fixed gases. Oxygen will form with iron to produce iron oxide at a temperature and under conditions involving the iron compounds during the selective freezing period. You cannot, therefore, expect to form oxide of iron (excepting as a surface indication) at low temperatures. Hydrogen will burn with enough oxygen to form water, the formulæ for which are above given, and if the oxygen is to be taken from the air it must be in the ratio of H_2O . Water is not decomposed in practice unless by the electrolytic method. In the decomposition of water by the electrolytic method, reference may be had to the experiments by Lord Layleigh, briefly as follows: "Hence one ampere liberates .00001038 grams of hydrogen. The strength of the current, in electrolytic bath, for any value of the hydrogen, may be set down as follows:

$$I = \frac{\text{weight in grams of H. per sec.; liberated}}{.00001038}$$

and in the abstract

$$I = \frac{\text{weight of any element in grams, liberated per sec.;}}{.00001038 \times \text{chemical equivalent of that element}}$$

when I = the current in amperes."

The current in amperes that would liberate 1 gram of hydrogen would simultaneously liberate 8 grams of oxygen. The actual power required in the process would depend upon the electromotive force of the "couple" involved. Taking into account the electromotive force (counter) then, determining the electromotive force necessary, in view of the resistance of the circuit in ohms, the potential difference can be ascertained. With the potential difference in volts it will then be possible to deter-

mine as to the power required to liberate hydrogen and oxygen. The practical formulæ for the determination of these values would look as follows:

$$W = EI \quad W = \text{energy in watts}$$

$$H. P. = \frac{EI}{746} \quad E = \text{electromotive force in volts}$$

$$I = \text{current strength in amperes.}$$

You will observe from the information thus far given that your proposition entails some complexities, and is more of an undertaking than can be disposed of in a limited space. A sufficient insight is here given to enable you to intelligently drop the subject, or serve as a clue to further research.

In burning hydrogen a hotter fire would be the result of the mixture under pressure, because for a given mixture the greater the pressure the greater would be the quantity of the hydrogen present. Since hydrogen is a fuel under certain conditions, the more you have of it the more heat will be manifest as the result of its association.

Your last proposition savors of a long journey at the behest of an explosion. There is a great difference as between using liquid fuel, to be mixed with atmospheric air, and your proposition. Feeding vaporized kerosene into a train of atmospheric air en route to the combustion chamber portrays a hazard, since "popping" in the carburetor is sure to follow a mal-condition of the mixture.

Gasoline is a very satisfactory fuel. It is difficult to state the degree of satisfaction entailed; manufacturers will have to put up with it until they find something better.

NEWSPAPER MAIL TO MANILA IS UNCERTAIN.

Editor THE AUTOMOBILE:

[1,630.]—In your issue of April 2 last you have an article on "Successful Experiments with Dry Cells." The article is No. 1,288. It has been impossible for me to get your paper regularly, and the paper with this article referred to was one of those I failed to get. Will you please state the substance of the article in question.

In Letter No. 1,288 you express the wish to learn the experiences of others in relation to two-cycle motors "four-cycling." I installed a 2-horsepower, two-cycle engine in a boat, and upon running the same I judged from the exhaust indications that something was amiss. Further investigation led to the conclusion that the motor "four-cycled" up to the time when the cylinders became warm. After the cylinders warmed up the motor went back to its two-cycle relation.

Manila, P. I.

F. H. THOMPSON.

Letter No. 1,288 seems to have been the fag end of a controversy. To rejuvenate dry cells, drill a hole in the sealing wax and spill a solution in through the hole, the same to be made of a one-quarter pound of salamoniac to a quart of water. Each cell will soak up a certain amount of the solution, and if the depolarizer is not neutralized or exhausted, provided the zinc is in sufficient presence, the cell so treated will be revived and serve further its useful purpose.

The experience you relate in relation to the four-cycling phenomenon in connection with a two-cycle motor, is not uncommon before the motor is warmed up in service. It is very likely the details of design have to do with this, since it is not unusual in some two-cycle motors to work code without four-cycling.

RESPECTIVE MERITS OF THE ANTI-FREEZERS.

Editor THE AUTOMOBILE:

[1,631.]—I am a subscriber of your very good magazine, and would say, if I am not in error, I have noticed two articles recently in same regarding anti-freezing solutions. One of these stated alcohol was better and the other recommended calcium chloride. Will you kindly state whether calcium chloride is injurious for this purpose, and if not, what proportion to use? C. A. HOFFMAN.

Ashland, O.

This is a subject that has been discussed on numerous occasions and from various points of view. None of the solutions are so perfect as to render it desirable to exclude water under favorable conditions of temperature. All the proposed mixtures will serve the intended purpose, and the drawbacks are insignificant in proportion to the benefits to be derived. Of calcium chloride there is this to be said: It must be chemically pure, and

it must not approach in density up to the saturation limit, considering the boiling point of water, as the prevailing temperature. The greater the quantity of calcium chloride used the greater will be the damage, if the chemicals are not "chemically pure," and if electrolytic action does take place, even if the chemicals are pure, the remedy lies in using as little of it as possible. The chances are a 10 per cent. solution will serve under the most severe conditions likely to obtain in these latitudes, but it will not be practicable to go wholly by the tabular values, of freezing point, for degrees of saturation. The reason for this lies in the fact that water boils off, and as the water decreases the solution becomes more concentrated. Alcohol is treated in another article in this issue.

THE HIGHEST SPEED AT GRAND STAND.

Editor THE AUTOMOBILE:

[1,632.]—Could you tell me in "Letters Interesting and Instructive" about what was the highest speed attained while passing the grandstand in the last Vanderbilt Cup race?

Washington, D. C.

H. T. CHITTENDEN.

No two observers will simultaneously reach the same conclusion in relation to the same matter, as it has oftentimes been found. The speed in front of the grandstand attained by the cars in the last Vanderbilt Cup race was variously estimated for different cars, all the way from 80 to 130 miles per hour. As a matter of fact, on hard level macadam road, 90 miles per hour comes close to the obtainable limit. The especially prepared road-bed in front of the grandstand is probably considerably faster than a hard macadam road, but how much faster it is difficult to say. In beach racing, as conducted at Ormond, it is generally considered that a given car will travel about six miles faster per hour than the same car could travel on a hard macadam road. It might be interesting to hear from some of the "stop watch sharps" who may have timed the cars in front of the grandstand.

BETTER "SWAP" CARS IN THIS CASE.

Editor THE AUTOMOBILE:

[1,633.]—As readers of your paper we would thank you for any information concerning two or three speed and reverse transmissions that could be placed in a "roadster" substituting the planetary system.

We would want a transmission that could be used without lengthening the wheelbase or making any other radical change. Our object in asking this is to do away with the noise and excessive grease caused by the planetary system. It would be quite satisfactory to have this answered in "Letters Interesting and Instructive."

DESMOND-STEPHAN COMPANY.

Urbana, O.

It is a source of regret not to be able to safely advise users of cars to change the design whenever they find pleasure or anticipate profit in the plan. It is not a project likely to end satisfactorily, and it is, as a rule, better to "swap" cars with some one who wants what he does not possess. "The distant verdure ever looks the greenest."

HOW TO MIX AN ANTI-FREEZE SOLUTION.

Editor THE AUTOMOBILE:

[1,634.]—Could you advise us as to what proportion of glycerine, alcohol and water to be used as a zero fluid to the best advantage, and what degrees they will stand?

MONNIER AUTO & CYCLE SUPPLY COMPANY.

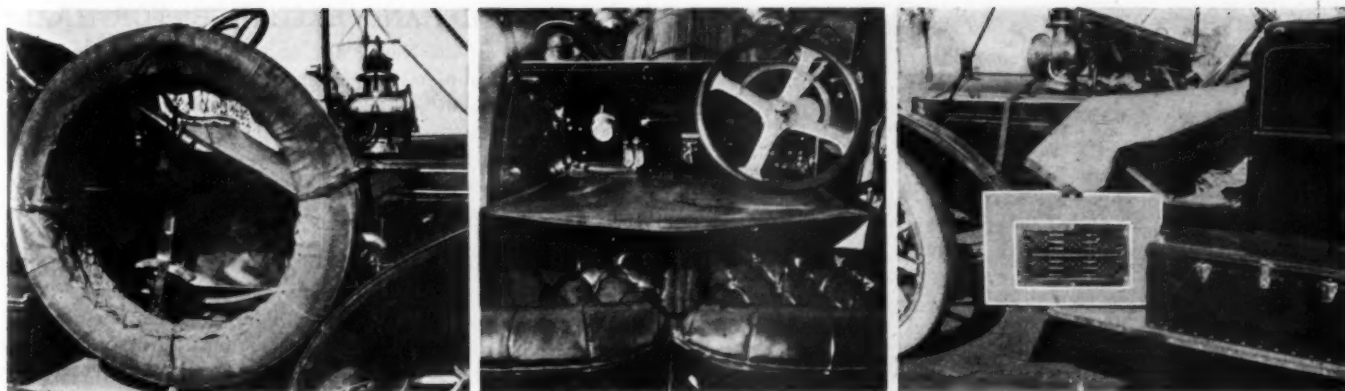
Detroit, Mich.

It is customary to use glycerine and water in equal proportions. This solution will serve well the purpose in these latitudes. Referring to alcohol, enough is to say it should be substituted in place of glycerine, retaining at much water as possible. It is the glycerine that is objectionable in that it attacks the rubber hose joints, and a fair remedy lies in using half water, as above stated, and equal proportions of glycerine and alcohol to make up the other half.

GRAPHITE AS A CYLINDER LUBRICANT.

Editor THE AUTOMOBILE:

[1,635.]—In the October 29 issue of your paper there appeared an interesting question, No. 1,603, concerning graphite as a cylinder



How Mr. Fowler, of Kansas City, Mo., Dispenses with a Lap Robe in Winter in His Packard.

lubricant. As answered by you, graphite is one of the best lubricants known for any purpose, provided it is of the bright variety (the same as with oils), and it has been proven by authorities that flake graphite of the Ticonderoga variety gives much better results because of its natural lubricating qualities, and the fact that the flakes are capable of an infinite subdivision and are thin and tough.

The object of the graphite is to get right at the real cause of friction by eliminating it rather than forming a temporary cure, that is, if one were to examine a metal surface (no matter how carefully polished) it would be seen to be filled with elevations and depressions, presenting the appearance of a nutmeg grater. Graphite fills in the low spots and builds over all a thin, tough, veneer-like coating of marvelous smoothness and endurance.

It has also been found that friction is lower when graphite and oil are used together, rather than when the graphite alone is used, as the oil serves as the carrying vehicle and helps to hold the flakes of graphite in place.

The objection cited that the graphite is likely to clog up the oil pumps and leads is a good one, and would prevent it being used if there were no other way. Where splash lubrication is employed the graphite may be put into the crankcase in the proportions of a scant teaspoonful to a pint of oil, and where there are no side plates the graphite may be mixed with the oil and poured down the vent pipe.

Some introduce the graphite by removing one of the spark plugs and squirting it through the aperture by means of an ordinary insect gun, which can be purchased at any drug store, or by means of a quill filled with graphite and rubber tube attached and the contents blown into the cylinder. Where graphite is used as indicated smoother running, higher compression and better regulation will be quickly noticed; then, too, there is the assurance that if the oil supply should temporarily fail there will be no bound pistons or scored cylinders.

We prepare a special graphite for this use, known as Dixon's motor graphite, which is our celebrated Ticonderoga flake graphite, ground to an exceedingly fine powder but still retaining all the advantages of the flake formation.

JOSEPH DIXON CRUCIBLE COMPANY,
per L. H. SNYDER.

ONE AUTOIST WHO LIKES TO BE COMFORTABLE.

Editor THE AUTOMOBILE:

[1,636].—In the issue of The Automobile of October 22, the title

of letter No. 1,592, "Do Autoists Like to Be Comfortable," attracted my attention. I, for one autoist, do like to be comfortable, and for that very reason I had a simple device made for my Packard that certainly improves my pleasure in it. I am enclosing you a few photographs of the device, and you are at liberty to publish them if you think they may be of use to any of your readers. The arrangement would, I believe, add to the pleasure of winter driving in any car.

Like many autoists who do much winter driving, I have often felt the necessity of an improvement on the common bungsomelap robe or "sack"—especially when driving in traffic and when handling the accelerator. A rubber or leather hood buttoned to the dash at the floor board and to the sides of the seats, solves the robe problem. If the exhaust pipe leads under the floor, an ordinary furnace register-face set in the board will admit a circulation of air around the pipe and up under the robe. The photos will clearly show the arrangement of the robe and buttons and the iron grill.

Now, I have no patent to bring before the public, no device to be sold to car owners—I just had the idea carried out for my own comfort—and, being very enthusiastic about the pleasurable necessity, I write you in hopes that it may prove an addition to the pleasure and comfort of autoing in general.

Kansas City, Mo.

H. A. FOWLER.

REACHES AND REMOVES DIRT AND GREASE.

Editor THE AUTOMOBILE:

[1,637].—I note letters of F. C. Snedecker (No. 1,587) and G. Ellsworth Meech (No. 1,610) on gasoline spray for cleaning the grease and dirt from auto machinery. I remember, as Mr. Meech does, that at one time someone advertised an air tank fitted with pump gauge, nozzle, etc., for cleaning by this method, but did not take much stock in it. But since Mr. Snedecker mentioned the subject, it set me to thinking I had around my premises a tank that was fitted up for brazing purposes that I could not make much of a success of in brazing. I removed the burners and put in place a length of rubber hose with fine nozzle, hole less than No. 60 Stub gauge. It is certainly the best and quickest method of doing that kind of cleaning that I have tried. I think as Mr. Meech does, that with the addition of a little kerosene it would improve matters. With this liquid, driven under pressure as it is, it will reach and remove dirt and grease in corners that is impossible to get at and other way.

Pittsfield, Mass.

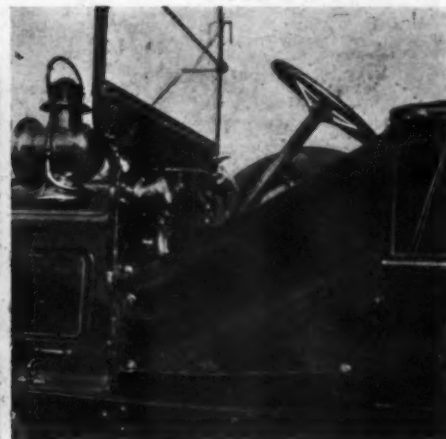
W. W. TRACEY.



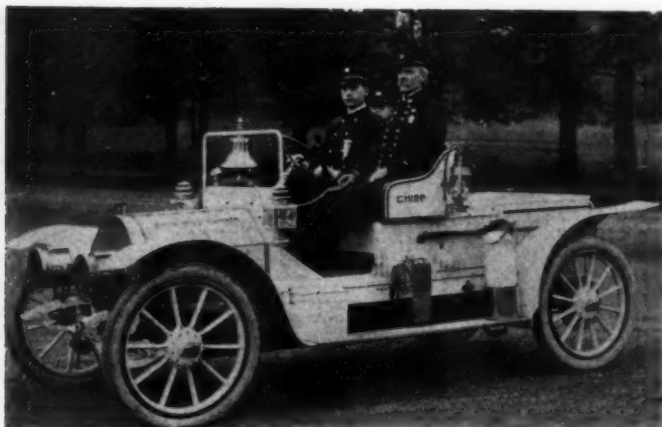
Showing Register Fitted in Floor.



Leather Hood Partly Removed.



Showing Hood Buttoned Down.



Philadelphia's Fire Chief and His Pierce-Arrow.

The chassis is a regular 4-cylinder 24-horsepower Pierce-Arrow, built by the George N. Pierce Company, of Buffalo, and a special body, consisting of two runabout seats and a box compartment in the rear containing hose and regular supplies usually carried on chemical trucks, was constructed by the Foss-Hughes Company.

MONTREAL MAY HAVE AUTO SPEEDWAY.

MONTREAL, QUE., Nov. 9.—The Montreal City Council is to be asked to make provision for the construction of a speedway for automobiles on the property belonging to the corporation. The project is advocated by an alderman who, in speaking of the proposed innovation, said that his plan was to ask that the vacant land on both sides of the aqueduct be turned into two fine macadam roads. The length of the aqueduct is something over five miles, extending from Point St. Charles to the lower Lachine road, above the Rapids. In order that the city could build the new conduit to Lachine, and also widen the old aqueduct from 40 to 140 feet, the corporation purchased more land on both sides of the aqueduct. After this is widened and the conduit is completed, there will still be 75 feet of vacant land on each side of the waterways. It is this vacant land that the alderman desires to see remodeled into two roadways.

The alderman admitted that in some forty years or so the city might need the land for an increased water supply, but in that event the automobile roads could be given up. The plea was put forth that there would be less fast driving in the streets of the city, if such a speedway is constructed. As the cost of macadamizing the two roads, no figures have as yet been made.

When the concrete covered conduit is completed parallel with the aqueduct it is proposed that before the water supply is turned on, there shall be an electric automobile trip through the subterranean passage, a distance of four miles.

PLAN SECOND-HAND EXCHANGE FOR TRADE.

At a meeting of the New York Automobile Trade Association, held last week, a plan was broached for the establishment by dealers of a "second-hand exchange." It was argued in support of the project that the handling of used cars received in exchange had become a great trouble and expense, necessitating, in the case of the large concerns, separate departments that required additional salesmen and took up much valuable floor and storage space. Attention was also called to the sacrifice attendant on disposing of cars to second-hand dealers and to the higher prices the public was compelled to pay when buying such cars.

It was suggested the dealers combine and form a stock company, rent a building in a more economical location than the Broadway district, and send their cars to the exchange to be sold at a fixed price, from which the exchange should deduct an established per cent commission. It has been further suggested that a monthly fee be charged for placing the car in the exchange to insure against loss from unsold or long unpurchased cars. In this connection it was pointed out that as the exchange corporation benefited equally on all cars sold, there would be no object for any favoritism to any one make over another.

It is believed that the public by such a plan would be able to buy cars at a cheaper figure, be assured of a fixed price, and indisputably have a far larger range of selection.

PACKARD WINS A BIG CANADIAN TRACK RACE.

WINNIPEG, Manitoba, Nov. 3.—After being postponed three times on account of unfavorable weather conditions, the Winnipeg Automobile Club's annual race meet was held Saturday, October 24, and attracted a large gathering of people to the new one-mile track at Kirkfield Park. The club races were the first racing events to be held on this track, which has only recently been completed and is one of the fastest and best constructed tracks in Canada.

The chief event of the meeting was the 75-mile race for the Dunlop trophy, a handsome silver shield presented to the club by the Dunlop Tire Company for annual competition in either a road or track event. Seven contestants faced the starter out of the original nine entries made. E. Nicholson's, Packard led throughout the race, being cleverly handled by his young chauffeur, O. W. Brown. McQuarrie on the McLaughlin Buick suffered from tire trouble in the thirty-second mile and lost six miles on the leader while making repairs. He, however, secured second place after a great struggle with Guest, who was driving John Galt's McLaughlin, the latter being third. When the third car crossed the line, P. C. Andrews, Stevens-Duryea, which was in fourth place, had completed 71 miles.



The Knox Cars that Form the Flying Squadron of the Springfield, Mass., Fire Department.



Model 20, 4-Cylinder 30-Horsepower Great Western Touring Car.

THREE lines of the Great Western cars are being manufactured by the Model Automobile Company, of Peru, Ind., for the season of 1909. These models are styled Models 20, 21, and 22. Model 20 is rated at 30 horsepower; Model 21 at 40 horsepower, and Model 22 at 50 horsepower. Each model is an exact reproduction of the 50-horsepower seven-passenger car this company has been building for the last three years, the difference being size and power.

The mechanical construction is identical in all, hence a description in common will serve, outside of bore and stroke. Half elliptic springs are used on the seven-passenger car and full elliptic on rear and half in front on Model 20 and Model 21. These models are made in either touring car or runabout at the same price.

Arrangement, Weight, Power and Dimensions.—The seven-passenger 50-horsepower car's weight per horsepower is 58 2-5 pounds; the 40-horsepower weighs 62½ pounds and the 30-horsepower weighs 62½ pounds in touring car and 63 1-3 pounds in runabout per horsepower. The cylinder dimensions are: Model 20, 4 x 5-inch stroke and bore, respectively; Model 21, 4½-inch bore, 5½-inch stroke; Model 22, 5-inch bore, 5½-inch stroke. Cylinders are cast separate. Any cylinder can be removed without disturbing any of the others. The pistons are roughed inside and out and then annealed before they are ground, thus giving them equality of expansion.

The exhaust valves are located in the head and are completely surrounded by water. The intake valves are at the side, and as close to the cylinder as possible for the purpose of leaving practically the entire clearance in the cylinder. The exhaust has ½-inch stem, the top of which is cupped to receive a steel ball against which the rockerarm works. This is done for the purpose of eliminating noise and to guard against side-

wearing of the lifts. The intake valves are also equipped with ball ends for the same purpose as the exhaust. Cylinders are offset a half inch from center of crankshaft.

The crankcase is aluminum, in two pieces, with spacious hand-holes for connecting rod inspection and adjustment, and has five bearings for crankshaft. Right here a step is taken which will prove a factor in motor building. The crankcase proper does not take any of the strain of the power strokes of the piston; instead the studs which hold the cylinders to the crankcase go clear through and hold the manganese bronze bearing-caps of the crankshaft. The bottom half can be quickly removed without interfering with any bearing. Nickel babbitt, "die cast" bearings are used throughout.

The crankshaft is a solid one-piece drop forging, heat treated and ground to size, carefully balanced alone and with flywheel assembled. All valves are operated by a single camshaft. The gears for camshaft, pump and magneto drive are enclosed in a separate oil-tight case, which is divided in such a way that either the pump or magneto can be removed independently of each other or the balance of the gears.

A gear pump is used in conjunction with a flat tube radiator of ample size to insure proper cooling. The fan is mounted upon an adjustable bracket and is driven by 1-inch belt three and one-half times the engine speed.

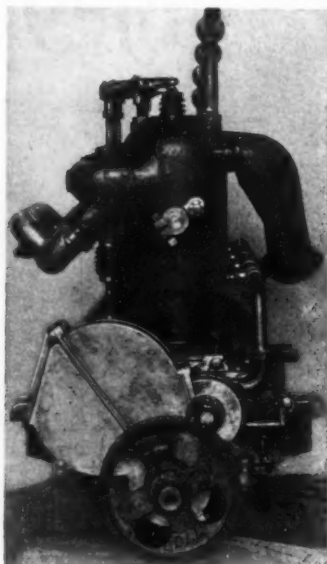
Oiling, Ignition and Carburetion.—Ignition is by high tension magneto and battery, each system independent of the other. The magneto is located on the right forward supporting arm of the crankcase, just ahead of the carbureter. A Schebler "type P" automatic water-jacketed carbureter is used, located in center of the motor, on the right-hand side just below the inlet valve chambers. The oiler, with seven sight feeds, is mounted close to exhaust pipe, to keep oil flowing freely in cold



Accessory Side of the New Four-Cylinder Motor.

weather, and is driven by an eccentric and ratchet. The splash system is used in the crankcase.

The Transmission System.—A cone clutch is used with "raybestos" covering, with springs under covering to insure easy engagement. One of the features of the clutch is its manner of releasing, which is through a ball thrust bearing instead of a sliding yoke. The ball thrust is of split type, making it easy to remove. The thrust plates are hardened and ground. This type of clutch is simple, easily understood and quickly adjusted for wear. The connection between clutch and transmission is a double universal joint with sliding square for clutch release.



Clutch End of the Motor.

The gearset is of the selective type sliding gear, three speeds forward and reverse. Countershaft gears are keyed and forced on by hydraulic pressure, spaced by tubing separators. The reverse gear is forged integral with shaft, the gear on the opposite end being riveted in place. The drive shaft is round with four keys integral with the shaft. The spaces between are milled, hardened and lapped to size. The bearings are absolutely interchangeable. Bevel gear and differential casing have thread and nut adjustment for setting mesh of gear and pinion. Drive shaft with load is perfectly straight.

Rear axle is a heavy steel tubing, riveted and brazed, making it secure. Brake hangers of steel castings with dust flangers are used. Brakes are large and powerful internal expanding and external band on wheel hub drum; external bands lined with camel-hair fabric. These brakes hold both ways; operated by hand lever; external brakes are operated by foot lever $1\frac{3}{8}$ -inch nickel steel. Floating axle transmits power to hub clutch plates in rear wheel.

Front axle is I-beam type of solid one-piece forging. The center of front axle is the lowest point of the car. The pivot point of the steering knuckle is supported on hardened thrust bearings. Steering gear is of the worm and gear type, with eccentric bushings to adjust to worm and gear. All rods, levers and equalizers are underneath the cars between springs, leaving outside clean.

Specifications in the Main.—Frames cold pressed nickel steel, channel section with subframe and cross-sections.

In all cases the tread is 56 inches. The Model 20 car had

106-inch wheelbase; Model 21, 114 inches, and Model 22, 122 inches. The ground clearance is 10 inches, or better, in all cases, and the wheels are artillery type on ball bearings. Special attention has been given to the spring suspensions, with the idea of adopting the car to rough country roads. The easy riding qualities are further assured by the use of liberal sizes of tires.

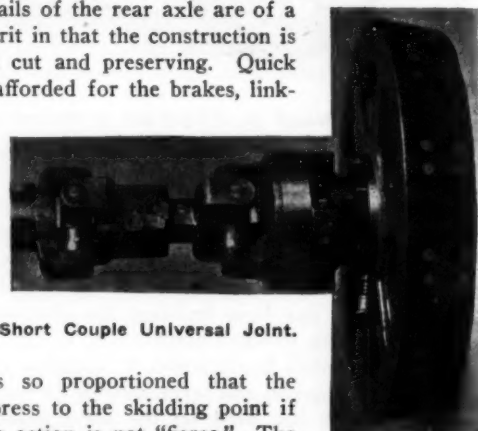
Some Protective Measures Shown.—Metal is used enclosing underpart of car; one side is hinged, while the other is clamped to the frame; thus the pan can be dropped very quickly, giving access to the underpart of car. Both front and rear fenders are designed for attractiveness and to insure greatest protection to car and its occupants. Much attention has been given to making the position of the driver comfortable, hence the space between the front and rear seat and dash is long and permits the driver to straighten out, and not be in a cramped position.

Some Notable General Features.—The details involving the clutch and the universal joints take on the appearance of a display of ingenuity in design, and there is a certain sturdiness in the construction that cannot be passed unnoticed. The details of the rear axle are of a high order of merit in that the construction is mechanical, clean cut and preserving. Quick adjustments are afforded for the brakes, linkage arms are

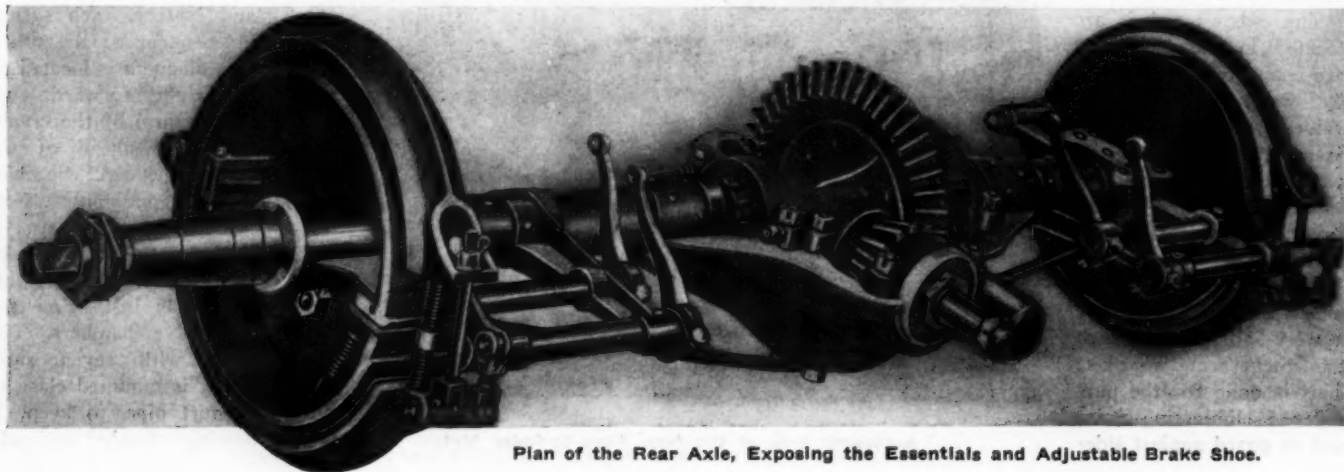
provided with outboard bearings, and the brake shoes have liberal areas and are sufficiently rigid to assure uniform contact.

The "motion" is so proportioned that the brakeshoes will press to the skidding point if necessary, but the action is not "fierce." The details in connection with the differential housing are very substantial indeed, bearing adequately supported, and the bevel drive is so arranged as to enable the workman to relate the gear and pinion in a manner to abort noise. The half time gears are separately and cleverly housed in, they are thus protected from foreign substances, and they may run in a grease pack for the double purpose of preventing noise on the one hand and engendering a long life on the other. The accessories under the bonnet may be quickly removed, are getatable in place, nor is it the least of the advantages, that ample provision has been made for oiling at every point.

The leather face cone clutch is very carefully designed with a view to eliminating "spinning" effects. The coefficient of friction is held at a high point through the addition of cork inserts.



Short Couple Universal Joint.



Plan of the Rear Axle, Exposing the Essentials and Adjustable Brake Shoe.

FRANCE PLANS TO HAVE AEROPLANE RACE

PARIS, Nov. 4.—There will be a flying race, the first the world has ever known, on the vast plains around Chartres, or on the open Champagne country around Rheims some time next fall. A prize of \$20,000 will be offered to the pilot of the heavier-than-air flying machine capable of covering the greatest distance in the shortest possible time, under detail conditions yet to be announced. In instituting its aeroplane race the Aero Club of France declares that it is convinced that sky pilots have outgrown the preliminary period of circling round a field, and that in future the art must be practiced across country, from town to town. The definite selection of a course will be made later, but in any case it will be either over the Beauce plains to the west of Paris—the granary of France, or on the Champagne plains to the East—world-famed for its wines. No more suitable spot could be imagined, for the country is as flat as the proverbial billiard table, there are few villages, and practically no natural obstructions. Detail regulations regarding the race are being anxiously awaited by intending competitors.

Among French sky pilots the announcement of the aeroplane race is received with immense satisfaction, and already one dozen men are counted on as certain starters. Either Wilbur or Orville Wright, or both, will, it is believed, take part in the race, which will be open to all without restriction of nationality; Farman, Delagrangé, Bleriot, Esnault-Pelterie, Kapferer, Gastambide-Mengin and Ferber are all looked upon as certain competitors.

A wave of aeronautical enthusiasm is sweeping over France, the desire to secure first place in aërial navigation being confined not merely to a group of enthusiasts, but being spread throughout the entire nation. Automobile constructors are keenly in-

terested in the future of the aeroplane, as is shown by the fact that not only their engineers closely studying the aerial motor question, but the heads of the leading automobile firms are frequent spectators at the flights of Wright, Farman and others.

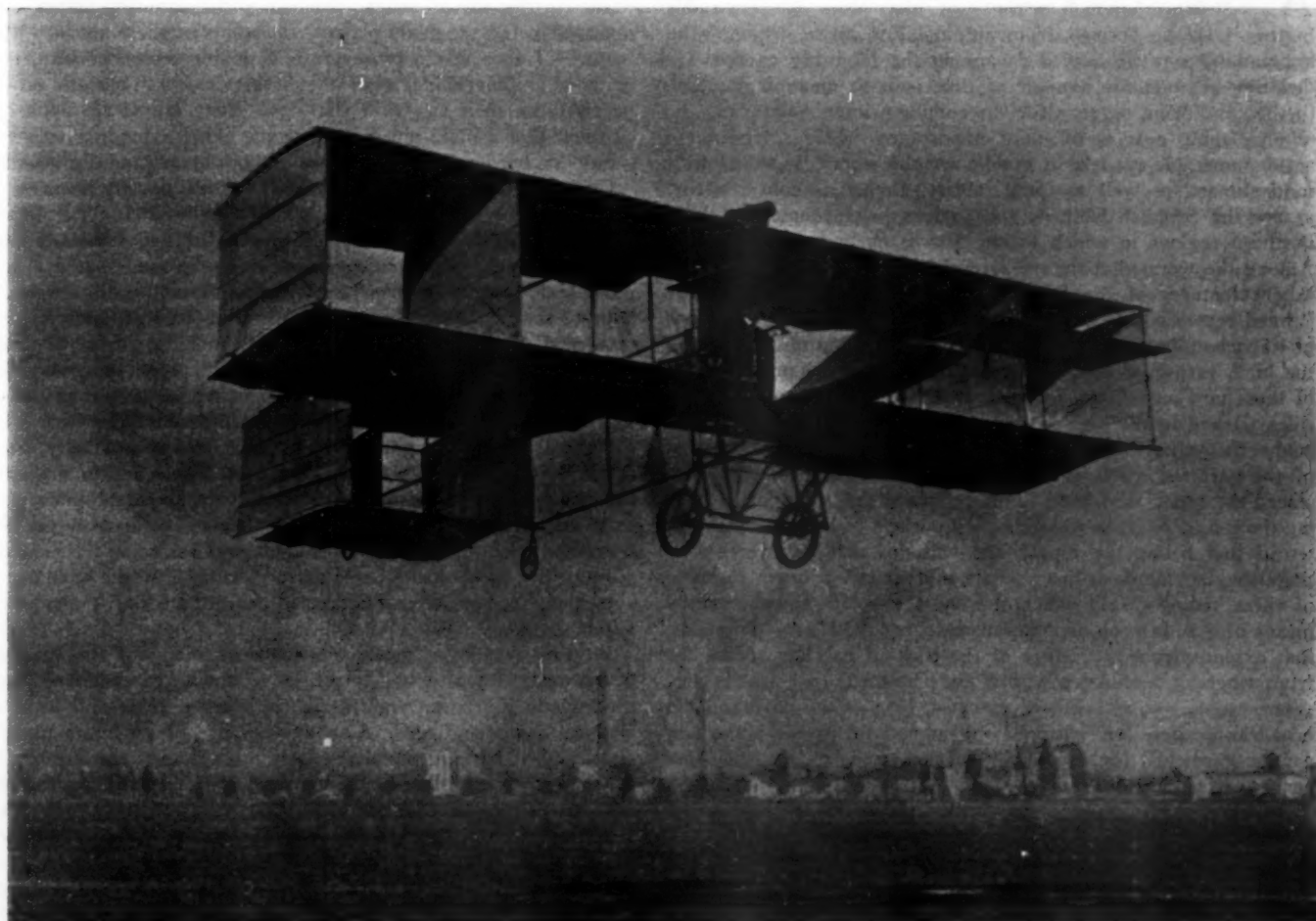
In addition to the Aero Club of France, the International Association of Recognized Automobile Clubs is occupying itself with aeroplane races. At the last meeting of this organization, held in Paris, it was unanimously decided to organize a flying machine race during the summer of 1910.

FRENCHMEN DO HONOR TO WILBUR WRIGHT.

PARIS, Nov. 5.—After being the subject of endless criticism and so little believed in that his name became synonymous with bluff, Wilbur Wright is the hero of the hour. He was the guest of honor this evening at the dinner of the Aero Club of France, at which M. Jean Barthou, the Minister of Public Works, presided, and who presented to Mr. Wright the Aero Club's gold medal and the special medal of the Academy of Sports. The 200 guests present included practically all the European experts and scientists interested in aviation.

FARMAN'S CROSS-COUNTRY AERO FLIGHT.

PARIS, Nov. 1.—Henry Farman has made the first cross-country aeroplane flight by a journey of about 17 miles from Chalons to Rheims. In order to clear obstructions he was obliged to rise to about 250 feet, and he accomplished the feat in 20 minutes, at an average speed of 45 miles per hour.



The Aeroplane of Leon Delagrangé in Graceful Flight at One of the Recent Trials at Issy-les-Moulineaux, France.



AS so much of that satisfaction in the consciousness of being well-dressed which a sense of piety does not invariably bestow, is to be derived from automobiling attire, women who are ambitious to be quoted as among the modishly garbed, are devoting an immense amount of time—not to mention money—to their motoring toggery for the coming winter. Naturally the all-enveloping coat is of chief importance. This season there are innumerable models in middle weight worsteds, suited to a mild climate, as well as thick fabrics, almost as cold resisting as are the Swedish leathers and various pelts adapted to those northern regions in which winter arrives early and lingers late. Among the worsted coats are several new designs embracing the salient features of the Directoire period. These are the wide pointed revers which fasten over the fronts of the coat by means of cabachon buttons run through elongated button holes, and the high, turn-over collar which also is button trimmed. Many of these new models are of pelisse and redingote shape, but with sides slashed to the hips so that despite a scantiness of material below the waist line, there is no strain upon the lower portion of the garment when its wearer is seated. On these coats are placed the broad turn back Louis cuffs and the wide flaps covering the top of really serviceable deep pockets of leather which are let in just below the hips. The raised waist line which distinguishes so many ordinary coats and gowns appears in some of these redingotes in which the short effect is emphasized by means of a wide strap of material matching the revers and collar, that extends from the centre of the back to halfway across the front where it terminates with a huge button. In black, brown, green, taupe, smoke, wistaria, catawba, blue, wine, gray and tan broadcloth, these semi-fitting long wraps make ideal medium weight garments for motoring and are sufficiently dressy for general street use.

Double box plaits form the backs of an exceedingly smart model coat of Scotch cheviot which has a double breasted front and biased side forms. This cutting scheme places most of the fulness in the back and gives the long, flowing lines of the Empire without making the garment cumbersome—a fault which automobile tailors were just a bit slow to rectify.

Two-faced cloths are much in vogue at the moment for long coats of the ulster order, finished with mannish collars and revers showing the gayly plaided inner side of the material. The feature of such coats, however, is a double set of pockets, two of goodly dimensions upon the breast and a duplicate set of nearly twice their size over the hips. They are so set upon the garment that a plaid piped strap of the cloth, extending over the shoulders, borders the outer edges of both breast and hip pockets.

Chinchilla cloth, Irish frieze and various novelty weaves of rough surface and being extensively employed for the heavy coats designed to take the place of the fur and fur-lined garments to which some women object on the ground that it is impossible to exchange them for a wrap of pelt until the backbone of the winter has been broken and all furs are permanently discarded. Necessarily these very thick materials must be made up as scantily as is possible else they will prove too bulky for use save when the wearer of them is riding. The best model of all those recently brought from Paris is one having a back with a straight centre seam and sides which widen gradually from beneath the arms' eyes where they join fronts cut in precisely the same manner. This gives sufficient flare about the knees and feet, but not an inch of unnecessary weight. So narrow are the front and back forms across the shoulders that when the medium sized conventional coat sleeves are set plainly into the wide arms' eyes, their tops are almost concealed beneath a collar of moderate width.

Buttons are not a prominent feature of any of these rough fabric coats, for although quantities of them are employed, they are strictly utilitarian and fasten the slashed sides and back as well as close the fronts. Usually they are of moderate dimensions and of bone or metal precisely the shade of the cloth. On the contrary, the collars and sometimes the cuffs are surprisingly ornate. Sometimes they are of brilliantly hued leather or French kid and often they are of Oriental embroidery done on satin or of velvet with tinsel soutache braiding.

In addition to the rubberized English mohair, taffeta, satin or crêpe de Chine storm coat which accompanies every wise woman upon a motoring trip, there are various novel accessories designed

to protect the shoulders, throat or head. One of these is the Mexican *poncho* of oil silk or rubberized light weight fabric and simply a circular of about umbrella dimensions with a hole cut in its centre through which the head may be thrust. Another device is the storm hood of materials similar to those employed for the *poncho* and large enough to be quickly drawn over the motoring hat of ordinary size. Its features, however, is the immense cape like those seen on old fashioned bonnets which falls well over the collar and perfectly protects the throat.

Knitted reefers of either wool or silk are of great convenience to the automobilist whose coat is not double-breasted, as they are made so wide and long that they entirely cover the chest and but for the lack of sleeves add quite as much warmth as did the old time waist length sweater. Happily the worsted coat has grown of late months to a really serviceable size, the newest of the sweaters extending quite to the knees and being shaped precisely like tight street coats of the conventional tailored type. With their high band collars covering the throat and their deep wrist bands extending half way over the hands, they promise so much warmth that fur coats seem unnecessarily burdensome. Yet there never has been a time when fur was so much to the fore in automobile circles. In addition to the aristocratic looking plucked muskrat which so closely resembles seal as to deceive

all but the initiated. The natural and sabled squirrel, the natural and dyed Russian pony and caracul, there are fetching looking garments in civit cat, leopard, coon and dog skin. While a majority of these coats are fifty inches long very smart affairs are of knee length, as some women prefer the three-quarters style in pelt as well as in the smooth and rough cloths that are fur-lined.

Gray, sabled and marked squirrel remain the favorite pelts for coat, hood and rug linings. Some of these intended for wraps come in such shape that they may readily be adapted to garments of any design so that, like the shawl collars of chinchilla, mink and linx, they may be shifted from a motoring to an evening wrap. The wee woman who likes to motor wears a sabled squirrel or white fox coat covering her skirt hem unless, like some of her elders, she has one of Swedish leather or French kid modelled after those of chinchilla cloth but lined brilliantly with kid-pale blue under white, red with French green and brown with cardinal.

Hats made of soft French felt, of Ottoman or of satin usually have the wind resisting depressed brim and the medium high crown, while those of leather kid or fur are on the turban or collapsible order, but hoods are rapidly coming to the fore as there is no danger of their blowing off and it is far easier to becomingly drape veils about them.

HINTS FOR WOMEN WHO CONTEMPLATE TOURING ABROAD

By BLANCHE McMANUS.

THE comparatively recent vogue for the three-seated auto has justified itself and quite exploded the old adage that "three's a crowd." Try one of the 18-horsepower, or even 12-horsepower; it's quite powerful for the kind of roads one ought to tour on—if they are too bad for that in the region where you propose going a more powerful machine won't make them any better, and you had best go by train in the good old-fashioned and more expensive way.

The supposed great cost of automobile touring is another bogey that ought to be exploded. Automobile touring, under certain normal conditions is cheaper than any other form of transport when one counts everything. A party of four women toured Normandy and Brittany in a hired automobile for ten days for something like \$40 each, and another party of five did six days on the Riviera, starting from Marseilles, for \$100 for the whole party. How about that!

With regard to the low-powered automobile, the writer once toured in the Alps in a *voiture légère*, built for two, with a horsepower of only six—but they were full-grown French horsepower, and Les Echelles, in Savoie; the Galiber; Lautret; Mont Cenis, and the Simplon had no terrors. The three-seated automobile can, of course, accommodate a chauffeur in the spider-seat behind, but you had much better fill it with a friend. He, or she, will have "the time of their lives" from such a viewpoint, and believe one who knows 12-horsepower is enough for the roads one meets in France, Italy and Germany, and in Algeria and Tunisia, too, if you think you would like something out of the ordinary, and the writer has done that, too, and found no grades in North Africa that a modest man's, or woman's automobile would not scale.

Practically the three-seated automobile enables one to do away with a fancy-priced chauffeur, who drives your machine at the hours which best suits himself, and to places whose hotels he has heard of from others of his kind, and who in general has a fine scorn for the byroads and the hotels of the country town.

Winter automobile touring abroad is largely confined to the Mediterranean countries, not ignoring Algeria and Tunisia, where the roads are of the best where they exist at all. Most people fondly imagine that the countries bordering upon the great Mediterranean lake are blessed continually with a Summer climate. They are not. There is plenty of sunshine, but there are cold areas and there are cold seasons, which are not the least allied to the idea of orange blossoms and olive groves.

The cold wind which comes up at sunset is nowhere more to be feared than on the French and Italian Rivas, and the daily drop in temperature at this hour is something inconceivable to those who know it not. So when you take your long-dreamt-of automobile tour over the olive-covered slopes of the French Riviera, or along the vine bordered roads of sunny Italy, just remember that you will need the same warm clothing which is necessary while touring in many other countries.

One can do without furs, however; indeed, you should always leave that sealskin coat at home while traveling abroad, and then you won't be harassed getting it back through the customs again. Furs are not really needed, except in the Scandinavian peninsula and Russia, and those places have not yet been developed as automobile touring grounds. Furs, on an automobile, are only catch-alls for dirt and perhaps other things not so harmless. The woman automobilist will find good warm cloth garments to more than take their place.

The woman automobilist not infrequently prefers the English inn to the Continental hotel, principally because she finds carpeted microbe breeding and harboring floors there, a plethora of furniture and dimity curtains at the windows, good-sized wash-basins, and personal service from a bevy of neat capped maids who understand how to envelop the traveler with that air of importance and distinction, especially dear to a certain class of traveling Americans, who often never had so important a personage about them at home as a nigger cook.

While on the continent femininity of the same class professes to be appalled by the rather gaunt and bare—though undeniably cleanly—furnished rooms of the average country hotel. There bare floors of waxed tiles or wood seem chilly and uncomfortable, and the personnel who receives the traveler is apt to be less effusive over one's coming than in England; their's is a politeness tempered with a friendly independence, which one can but admire; they do not crawl or fawn about one, and you do not pay for inefficiency in the bill on leaving, either.

The advantages of the English inn are mostly superficial, however, and one soon learns to prefer bedrooms which seem rather to have gone through a process of elimination than an addition of useless lumbering accessories. The more efficient, though more independent continental *garçon* is worth half a dozen simpering mob-capped maidens when it comes to getting you installed in your rooms on arrival and getting your luggage down and strapped on the automobile on leaving.

CLUBS AID IN SUPPRESSION OF RECKLESS DRIVING

NEW YORK, Nov. 8.—Reports received at the headquarters of the American Automobile Association indicate that officers of many of the local automobile clubs which have placed their organizations on record as strongly opposed to speeding and reckless driving are not content with this action alone, but intend to place the responsibility where it rightfully belongs, upon the autoists of other States, who in many cases do not evidence any desire or inclination to observe the local speed laws. Many of the automobile clubs affiliated with the A. A. A. have during the past several months endeavored to break up the reckless driving and speeding through the principal thoroughfares, and the Automobile Club of Springfield (Mass.) has taken drastic action which will without doubt have a far-reaching effect.

At a recent meeting of the directors of the club, which is one of the largest and most influential in New England, it was decided to have suitable cards printed which will be displayed in all of the hotels and garages in Springfield and vicinity and leading through the popular routes into the adjoining States. These cards will call upon the automobilists to use the roads in a safe and sane manner, and if they fail to comply with the club's request, the directors have decided that there is but one alternative, that, the establishment of official club speed traps. The Springfield club is determined that the speed laws in the vicinity shall be properly observed, the club feeling morally responsible for the acts of the autoists from other States and they will not hesitate to establish traps if it is deemed necessary.

The club has taken this step upon their own initiative without waiting for specific complaints to be made, and in this connection have taken more radical action than the other clubs in New England which have been considering the best means of discouraging the continuous speeding over the splendid highways of that section.

It is only a few weeks ago that Secretary Elliott of the A. A. A. sent a warning against reckless driving to the officers of the 200 automobile clubs scattered throughout the United States, to the effect that drastic anti-automobile legislation would surely be enacted in many of the Eastern States, particularly Connecticut, if a stop was not put to the reckless driving over the roads of New England. There has already been some agitation regarding the Connecticut automobile statute, regarded as one of the modern motor vehicle laws in the country, being likely to be repealed, unless the autoists touring through the State cease speeding and thereby tend to diminish the number of accidents which have frequently occurred to the other users of the highways.

STATE ROAD TO DELAWARE WATER GAP.

SCRANTON, PA., Nov. 9.—At the annual election and banquet of the Scranton Automobile Association the papers read by the officers who had served in different capacities during the past year brought clearly before the minds of all the seventy odd members present the commendable work that has already been accomplished, or on the way of accomplishment, by the association. The retiring president, Dr. H. B. Ware, read a report on the growth of the association and the object which caused it to be organized, mentioning in detail some of the more important of these which have been attained: the changed attitude of the police and city authorities towards the reasonable use of the automobile, the work of educating the county overseers up to the point where they will be equally as desirous for good roads as the automobilist, and the proposed meeting between club members and the overseers to further this purpose.

The report of the chairman of the good roads committee, E. M. Clarke, was especially interesting as it dealt largely with the progress made in the proposed state road from Scranton over the Poconos to the Delaware Water Gap. He stated that if the association would bind itself to stand half of the expense falling

upon the township through which the road passed, it would be an assured fact. This means about \$6,000, which he said could be easily raised as he had already received pledges for liberal contributions.

The officers for the following year are: President, Thomas Sprague; vice-president, William H. Richmond; secretary-treasurer, Hugh B. Andrews. Dr. H. B. Ware, George Jermyn, and John Creining were elected to the board of governors to serve for three years.

ROCHESTER CLUB WANTS 1,000 MEMBERSHIP.

ROCHESTER, N. Y., Nov. 9.—The Rochester Automobile Club under its present administration is rapidly growing in membership, the total now being 531. The aim of President Henry G.

\$100 REWARD

Will be Paid by the

Rochester Automobile Club

for information leading to the arrest of the person driving the automobile which ran over JOSEPH HARTMAN on East Avenue, at six o'clock, Wednesday Evening, October 28, 1908.

Rochester Automobile Club

BERT VAN TUYLE, Secretary

Facsimile of Notice Issued by Rochester Automobile Club.

Strong and Secretary Van Tuyle is 1,000 before the next annual meeting. Seventeen members were added at the recent meeting. The secretary's office is at the Hotel Seneca.

Recently there has been some reckless driving in and about Rochester, and as a result of a recent incident the club has sent broadcast the circular herewith reproduced. The club deems it advisable to apprehend, if possible, infringers of the speed law and the rights of pedestrians. The case in question was one of flagrant disregard of the latter, and its perpetrator should be made an example of.

CLUB ACTIVITIES IN AND ABOUT PHILADELPHIA.

PHILADELPHIA, Nov. 9.—Club activity in the Quaker City is on the increase. That solid old organization, the Automobile Club of Philadelphia, having just gotten its one annual competitive stunt—the Brazier Cup contest—off its hands, is now busily engaged considering ways and means of building a centrally located and handsomely equipped clubhouse and garage to accommodate its rapidly growing membership. The committee having the matter in charge has met with such success in seeking subscriptions to the proposed bond issue to float the scheme, that it has been decided to enlarge its original plans and endeavor to secure at once the entire sum that must be guaranteed before any conclusion of the matter is possible. It is authoritatively stated that the opening of next Spring will see the hopes of the

committee well on the way toward fulfillment. The club is still adding substantially to its rolls at every meeting, no less than 26 being admitted at last Monday's gathering of the Board of Governors. The committee on routes, maps and signs—which, by the way, is doing such excellent work that it is being set up as a model by clubs in others sections of the country—is almost ready with a complete revision of its road map of Philadelphia and vicinity, which will be issued from the press shortly, together with an additional book of routes. Each month this committee erects, or causes to be erected, at least a score or two of mileage, direction, and warning signs, and its work is in evidence no matter what direction the automobile traveler may take in coming into or leaving the city. This feature of the club's activities has been most potent in attracting those automobilists who realize the value of such work, and has been responsible for the addition of a large proportion of the new membership.

Up in Germantown the same old story of outgrowing the facilities afforded by the twice-enlarged clubhouse are heard, and now, in order to find room for a portion of those who are growing restive at being compelled to decorate the long waiting list for such a length of time, the officials of the club have decided to enlarge its quarters, and work will be begun on a handsome addition in the near future.

The Quaker City Motor Club, having recovered from the jubilation following its successful management of the 200-mile Founders' Week race in Fairmount Park, is taking the first steps toward opening the 1909 season. To-morrow a bunch of "pathfinders" will leave town to select hard routes to and from Wilkes-Barre, which has been decided upon as the outward mark from its annual two-day New Year's run, January 1-2 next. The remembrances of the too-numerous ties and the subsequent run-overs are still fresh in the minds of the contest committeemen, and the "pathfinders" have been ordered to select routes sufficiently difficult to keep the number of clean-score cars within a reasonable limit. MacDonald & Campbell, donors of the first prize cup, have announced that this year they will allow that emblem to go for "keeps" to the winning car, despite the fact that the original deed of gift called for a three-time win in order to secure permanent possession of the cup.

The Quakers have chartered the steamship *Grecian*, sailing November 22, for the round trip to the Savannah races.

Across the Delaware, the erstwhile Camden Automobile Association has been reorganized as the Camden Motor Club, and is preparing to take active part in bringing about a much needed improvement in Camden county's roads. Dr. H. H. Grace is president of the reorganized club, with W. L. Hurley vice-president, and George E. Rhedemeyer, Merchantville, N. J., secretary and treasurer.

WILKES-BARRE CLUB HAS WON ITS FIGHT.

WILKES-BARRE, PA., Nov. 9.—The Wilkes-Barre Automobile Club has succeeded in its fight to have the bridges across the Susquehanna from Wilkes-Barre to the west side and one from Pittston to West Pittston, declared free bridges. The members of the club circulated a number of petitions which were presented to the grand jury along with evidence resulting in the recommendation that these bridges be purchased by the county and thrown open to all without cost. This will not only save the members of the club a great deal of annoyance, but also all drivers of automobiles who travel through that section of Pennsylvania.

The sign post committee of the club is now busily engaged in carrying out its work of erecting direction and danger signs on all the main traveled roads in this vicinity with the hope that this beginning will be completed within the next few weeks.

On Saturday of last week the good roads advocates of the Wilkes-Barre Automobile Club secured the indictment of Mayor Lewis P. Kniffen and thirty members of the common council, for maintaining a nuisance in failing to have the streets of the city properly repaired. District Attorney Abram Salsburg laid the case before the grand jury and will call the accused for trial.

SCRANTON CLUB TO RAISE ROAD MONEY.

SCRANTON, PA., Nov. 9.—The plans for the State road over the Pocono Mountain towards Stroudsburg are taking such a definite form that there seems to be no doubt about the road's final completion. The supervisors of the different townships, and officers of the Scranton Automobile Association have at last gotten together and work will be started this week by members of the club to raise the \$6,000 which they have promised as a body towards the construction of this new highway. Now that the farmers in the townships know exactly what the Automobile Association will do in the way of raising money, the petitions will be filed with State Highway Department immediately. The work of collecting the club contributions will be in the hands of E. M. Clarke, of the firm of Clarke Brothers, and Solicitor H. B. Andrews, of the Automobile Association.

VIRGINIANS ELECT NEW OFFICERS FOR 1909.

NORFOLK, VA., Nov. 9.—At a recent meeting of the Tidewater Automobile Association of this city the association elected officers for the coming year and afterwards adjourned to the Lorraine hotel where a banquet was served in honor of the third successful year of the organization. The slogan of the meeting was not only good roads for the country, but the city as well, where many of the streets have been allowed to exist in a state not even fit for country roads even. The following officers were chosen for the coming year: President, W. M. Whaley; first vice-president, C. H. Bull; second vice-president, J. M. Gibbs; secretary and treasurer, C. L. Young. The directors elected were: F. O. Smith, S. W. Pannill, S. W. Harris and D. P. Paul, who, with the officers, include the board.

ATLANTA AUTOMOBILE CLUB ORGANIZED.

ATLANTA, GA., Nov. 9.—Over sixty automobile owners of Atlanta have organized the Atlanta Automobile Club and elected the following officers: President, Edward H. Inman; vice-president, Charles H. Ryan; secretary-treasurer, W. G. Humphrey. Executive committee: Beaumont Davidson, R. F. Maddox, J. D. Rhodes, Asa Chandler, Jr., Frank S. Ellis, and R. R. Arnold, Jr. More than \$6,000 has already been subscribed for the purpose of erecting a club house and President Inman will appoint a committee to have full charge of this work with the hope that suitable quarters for the club will be built at an early date.

KOKOMO INDIANS ORGANIZE A CLUB.

KOKOMO, IND., Nov. 9.—Automobile owners of this place and vicinity have organized the Kokomo Automobile Club with an initial membership of over 100. Articles of incorporation have been filed and plans are on foot for securing club rooms in a suitable location. At the first meeting all the members were enthusiastic for a campaign in conjunction with the other clubs in the State, for the advancement of the good roads movement.

SAWYER NOW MASSACHUSETTS SECRETARY.

BOSTON, Nov. 9.—At an adjourned meeting of the directors of the Massachusetts State automobile association Herbert M. Sawyer of the Worcester Automobile Club was elected secretary to succeed James Fortescue, who refused a renomination to the office. Mr. Sawyer has been prominent in the affairs of the Worcester club, was last year secretary of the Worcester Board of trade and has a reputation as a hustler.

ANOTHER CLUB FOR PENNSYLVANIA.

KITTANNING, PA., Nov. 9.—The automobile owners of Kittanning have at last organized and the membership at present numbers about thirty, with prospects of a constantly increasing roll. J. H. Painter has been elected president and W. Moorhead, secretary and treasurer. The club proposes not only to work in the interests of better roads, but to provide better garage and repair facilities for Kittanning.



Vol. XIX

Thursday, November 12, 1908

No. 20

THE CLASS JOURNAL COMPANY

Thirty-ninth Street Building, 231-241 West 39th St.
New York City

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FOREIGN SUBSCRIPTION AGENTS:

ENGLAND:—W. H. Smith & Sons, Ltd., 186 Strand, London, W. C., and all their
railroad bookstalls and agencies throughout Great Britain; also in Paris
at 248 Rue de Rivoli.
FRANCE:—L. Baudry de Saunier, offices of "Omnia," 20 Rue Duret, Avenue
de la Grande Armée, Paris.
GERMANY:—A. Seydel, Mohrenstrasse 9, Berlin.

Entered at New York, N. Y., as second-class matter.
The Automobile is a consolidation of The Automobile (monthly) and the Motor
Review (weekly), May, 1902, Dealer and Repairman (monthly), October, 1903,
and the Automobile Magazine (monthly), July, 1907.

Copies printed in 1905	- - - - -	730,000
" " in 1906	- - - - -	791,000
" " in 1907	- - - - -	888,000

MUST BE REFORM FROM THE INSIDE.

It has become a necessitated case of reform from the inside in many localities where visiting autoists are numerous and negligent in observance of the rights of the other users of the road.

Members of legislative committees of various State bodies of the American Automobile Association each year have found it harder to answer successfully the charge of the lawmakers that an increasing number of autoists, when away from home, act in a manner of which they would not be guilty in their own localities. It is a situation where it looks very much as though the needs required a law-abiding autoist to catch a law-breaking autoist, and this idea is likely to spread quite generally and effectively in the next few months.

One club has met the issue squarely and without equivocation. On one of the most traveled main routes lies Springfield, Mass., and the abuse of the roads in its environs has gone beyond further acquiescence by the local automobile club, which announces that it will aid energetically in the punishment of those "tourists" who leave in their trail a cloud of dust and an assortment of mangled poultry and dogs, with the occasional inevitable catastrophies of greater magnitude. These roughs of the road must be brought to the bar of justice, and unless a

plan is evolved whereby it is accomplished, the demand for more stringent laws will be unsuccessfully met by those autoists who labor generously every Winter at State capitals in the effort to obtain reasonable statutes.

If it is an established fact that the autoists themselves are lending efficient aid in apprehending these offenders, it will lessen in vast degree legislative prejudices, which are slowly giving away and would be dissipated more quickly were it not for the unjustifiable use of the highways by the inconsiderate few. These speed-crazed beings have miles of open country, and they should be hammered, if must be, into a sense of decency in places where the rights of others call for recognition.

* * *

ALMOST IMPERCEPTIBLE REFINEMENTS.

The time was when autoists were curious to know why ambitious types of automobiles ran into money. They could not see the equivalent in their cursory examination of the cars. They did admit the good performance, and they were persuaded to pay the price.

The most recent slant of this character lies in the desire for enlightenment along lines involving the 1909 cars. Why are they so much better, when the price is so much lower? It is like everything human; experience teaches economies, processes bow to refinements, and duplications of efforts eliminate themselves in time.

There is a great difference between doing things as a matter of course, and groping around in the dark, hoping thereby to stumble upon the missing link. In every art, science and industry a certain amount of groping must precede a definite measure of success. Fortunately, groping is the task of intelligence, but while the process goes on the cost floats up. Fortunately, ignorance might forego the finish, and the cost would never fall to the tune of soaring quality.

The reasons why the costs can be lower, and the quality become superior, are deep seated and scattered. They lie in the definite aims, the swelling volume of trade, and automatic co-operation on the part of the vendors of materials, the designers of automobiles, and the artisan, who weld the aggregation into the splendid finished products that greet the sober, earnest thinkers, who must support an industry to render it a complete success.

* * *

IN THE CONTROL OF COMPETITIONS.

Automobile competitions of the big sort are expensive. This expense is now borne, except in rare instances, by the manufacturers. It would appear logical that the man who pays the bills should have considerable voice in the premises; in the past, in this country, he has been a necessary yet modest factor. It is a good guess that his attitude will change shortly, and there are indications that the future will tell its own story in this regard.

That the methods of conduct and caliber of entrants will not deteriorate, is assured in advance, and, furthermore, the public will be interested to the same extent when patrons realize that the business element will not be allowed to intrude itself in a detrimental manner. That this can be accomplished, is evident from the results in France, where the makers have much to say as to what they will compete in and how and when.

LAW SAFE IF OFFENDERS ARE PUNISHED.

HARTFORD, CONN., Nov. 8.—Never since its inception has a more enthusiastic meeting of the Automobile Club of Hartford been held than that of Friday noon last. About a hundred of the members congregated at the Allyn House, completely filling the clubrooms. Many prominent citizens were present, including United States Senator Morgan G. Bulkeley, Mayor E. W. Hooker, City Engineer F. L. Ford, Colonel George Pope, and J. Gilbert Calhoun. Delegates from the various clubs comprising the Connecticut Automobile Association were present as the guests of the Automobile Club of Hartford.

After lunch the gathering listened to a very neat speech by Senator Bulkeley, who stated in connection with violations of the State automobile law that that measure was still good, even if it had been abused. It was the senator's opinion that bringing the offenders to book would alleviate present conditions.

Colonel George Pope, a member of the legislative committee which did a lot of hard work in the interest of the present liberal law, was the next speaker. Colonel Pope expressed the view that there was nothing to fear in the forthcoming legislative body as regards a possible abrogation of the present law. "What we really need is not to repeal the law, but to enforce it."

Walter S. Schutz, attorney for the Automobile Club, spoke particularly of the money realized from licenses which should be expended for road repairs. Mr. Schutz struck a keynote when he remarked that one thing badly needed was a bridge across the Connecticut River at Lyme and Saybrook.

At the conclusion of the lunch a mammoth bunch of flowers was sent to Louis Elmer, the local Ford agent, who is seriously ill at the Hartford Hospital.

Following the lunch there was a business meeting of the Connecticut Automobile Association. J. D. Anderson was unanimously elected a director to the State body, vice G. K. Dustin, resigned. C. H. Gillette was elected secretary of the State association to fill the unexpired term of G. K. Dustin, resigned, and J. M. Brooks, of the Litchfield club, was elected treasurer.

The matter of compelling all wheeled vehicles to display a light at night was discussed. Such a measure was asked for in the last Legislature, but the farmer vote downed it. However, it will be tried again this season, and it is hoped that it will be passed successfully.

NEW JERSEY AUTOISTS ARE ORGANIZING.

NEW BRUNSWICK, N. J., Nov. 9.—The activities of W. C. Crosby, acting president of the Associated Automobile Clubs of New Jersey, and H. A. Bonnell, its secretary, have resulted here in the formation of the Middlesex County Automobile Club, the second meeting of which was held to-night. While L. A. Voorhees is the choice for president, Frederick Schussler for treasurer, and A. W. Clark for secretary, it was decided to postpone the actual selection of officers until the nominating committee presents additional names for vice-presidents to represent the club in various sections of Middlesex county.

Those present at the meeting to-night also included: F. H. Elliott, secretary of the A. A. A.; J. V. Z. Anthony, president, and J. H. Edwards, ex-president, of the Automobile Club of Hudson County; Jacob Mason, vice-president of the New Jersey Automobile Trade Association; and Dr. J. R. English and Joseph Wood, ex-presidents of the New Jersey Automobile and Motor Club.

OLDS MANAGER DENIES COMBINATION STORY.

LANSING, MICH., Nov. 5.—Frederick L. Smith, general manager of the Olds Motor Company, denies that the company contemplates combining with other concerns under J. Pierpont Morgan.

"There is no foundation for the story," said he. "The Olds Motor works is on a firm financial basis, and is enjoying the best business in the history of the concern. The idea of selling the interests or joining with any combination has never been entertained."

FORD CAPITAL INCREASED TO \$2,000,000.

LANSING, MICH., Nov. 5.—Papers were filed with the Secretary of State to-day for an increase of the capital stock of the Ford Motor Company, Detroit, from \$150,000 to \$2,000,000.

WHITE STEAMER WINS THE DESERT RACE.

PHOENIX, ARIZ., Nov. 10.—The White steamer won the race from Los Angeles to Phoenix. The White arrived at 6.33, the KisselKar at 7.41; the Elmore at 8.45; the Franklin at 9.50 P. M., Pacific time.

The Franklin had several hours' lead in California, but went astray on the desert, and the driver slept four hours until daylight, fearing to make a bad matter worse with a false start.

President Bullard of the Automobile Club says the White won, the Elmore second, KisselKar third, and Franklin fourth, but no official determination will be made until the arrival of mailed reports, showing the time deducted at the time the Colorado River was crossed.

RAILROADS GRANT REDUCED RATES TO A. A. A.

During the coming show season the American Automobile Association is to hold special meetings, the first series being scheduled to take place January 4 to 7, or during the week of the first show to be held at the Palace under the auspices of the American Motor Car Manufacturers' Association, and which will open New Year's eve. The second series of meetings will be held January 19 to 23 inclusive, during the week of the show at the Garden under the auspices of the Association of Licensed Automobile Manufacturers, which opens January 16 and continues for one week. At the request of the A. A. A., the Trunk Line Association has granted a special reduction of a fare and three-fifths for the round trip to members of the three A's desiring to attend either of these meetings. For the former, tickets can be purchased from December 31 to January 5, good returning up to and including January 11, while for the second meeting tickets must be purchased January 15 and 21, and will be good up to and including January 27 for return. Only members of the clubs affiliated with the American Automobile Association, or individual members of the latter, are entitled to the reduction. Autoists who are already members of the A. A. A. may file applications with the secretary, Frederick H. Elliott, at national headquarters, 437 Fifth avenue, New York, where the meetings are to be held.

MORE EUROPEAN BUYERS OF KNIGHT PATENTS.

PARIS, Nov. 5.—It has now been ascertained that the Knight silent engine will be adopted on some of the Panhard-Levassor models next season. Though it has been known that Panhard has been testing the motor for the past few months, the officials of the company persistently denied any knowledge of it, and only a few days ago declared that they would have nothing new for the coming season. As chassis fitted with the Knight engine have been seen on the road in the hands of testers, it became impossible to deny that it was being studied at the Panhard factory, and this week official announcement was made that the patents had been brought.

It is not yet known on how many models the new engine will be fitted, or what modifications on Knight's original patent have been made. Each of the firms buying the patents is free to make whatever changes it may consider necessary, and it is certain that Panhard, like the others, will adopt certain modifications.

According to rumor, the Knight patents have been taken up in Germany by the Mercedes company and in Italy by the Fiat firm. No official confirmation of this can, however, be obtained. All that is certain is that in England Daimler will apply the Knight principles to all 1909 models, that Minerva will do the same in Belgium, and that Panhard will use it to some extent in France.

CHICAGO'S LIST OF EXHIBITORS BREAKS THE RECORD

NINETY-TWO makers of pleasure vehicles are already entered to exhibit at the Chicago show, with several still remaining on the waiting list. The high water mark in the previous show was ninety. The prospects of the big western exhibition, scheduled for February 6-13, are that in point of size it will exceed any previous automobile show ever held here or abroad. All spaces allotted up to date have been accepted.

The exhibitors, as will be seen on reference to the list, include practically every manufacturer of note, and, in addition, several who have not previously exhibited. As usual the Chicago list contains the names of several makers who will exhibit at no other show. There will be 12 automobile exhibits in the basement of the Coliseum Annex, the names of which are not included in the accompanying list, but will be announced later.

FIRST REGIMENT ARMORY.

Kissel Motor Car Co., Hartford, Wis.
Speedwell Motor Car Co., Dayton, Ohio.
Buckeye Mfg. Co., Anderson, Ind.
Jackson Automobile Co., Jackson, Mich.
Columbus Buggy Co., Columbus, Ohio.
Moon Motor Car Co., St. Louis, Mo.
Atlas Motor Car Co., Springfield, Mass.
Dorris Motor Car Co., St. Louis, Mo.
Overland Auto Co., Indianapolis, Ind.
Motorcar Co., Detroit, Mich.
Pope Motor Car Co. (Waverley), Indianapolis, Ind.
W. H. Kiblinger Co., Auburn, Ind.
Mora Motor Car Co., Newark, N. J.
Nordyke & Marmon Co., Indianapolis, Ind.
Moline Automobile Co., E. Moline, Ill.
Auburn Automobile Co., Auburn, Ind.
Anderson Carriage Mfg. Co., Anderson, Ind.
Chicago Coach and Carriage Co., Chicago, Ill.
Rapid Motor Vehicle Co., Pontiac, Mich.
Black Mfg. Co., Chicago, Ill.
Meteor Motor Car Co., Bettendorf, Ia.
Streator Motor Car Co., Streator, Ill.
Staver Carriage Co., Chicago, Ill.
Anderson Carriage Co., Detroit, Mich.
Model Automobile Co., Peru, Ind.
J. V. Lindsley & Co., Dowagiac, Mich.
Fort Pitt Motor Mfg. Co., New Kensington, Pa.
Wayne Works, Richmond, Ind.
Gaeth Automobile Co., Cleveland, Ohio.
Berliet Import Co., Chicago, Ill.
Rauch & Lang Carriage Co., Cleveland, Ohio.
C. P. Kimball & Co., Chicago, Ill.

MOTOR CYCLE SECTION—ANNEX SECOND FLOOR.

Minneapolis Motor Cycle Co., Minneapolis, Minn.
The Pierce Cycle Co., Buffalo, N. Y.
Merkel-Light Motor Co., Pottstown, Pa.
Reading Standard Co., Reading, Pa.
New Era Gas Engine Co., Dayton, Ohio.
Bicycling World, New York.
Magnet Motor Co., Chicago, Ill.
Motorcycle Illustrated, New York.
Hendee Mfg. Co., Springfield, Mass.
Harley-Davidson Motor Co., Chicago, Ill.
Excelsior Motor Mfg. Co., Chicago, Ill.
Wagner Motor Cycle Co., St. Paul, Minn.
Consolidated Mfg. Co., Toledo, Ohio.
Ovington Motor Co., New York.
Aurora Automatic Machinery Co., Aurora, Ill.
Thiem Mfg. Co., Minneapolis, Minn.
Auto-Bi Co., Buffalo, N. Y.
American Motor Co., Brockton, Mass.
N. S. U. Motor Co., New York.
The Hornecker Motor Mfg. Co. Geneseo, Ill.
Armac Motor Co., Chicago, Ill.

COLISEUM MAIN FLOOR.

Winton Motor Carriage Co., Cleveland, Ohio.
Pope Mfg. Co., Hartford, Conn.
E. R. Thomas Motor Co., Buffalo, N. Y.
Stevens-Duryea Co., Chicopee Falls, Mass.
Peerless Motor Car Co., Cleveland, O.

Last year's attempt to organize a motor-cycle department was only partially successful. Manufacturers delayed their applications to such an extent that it was necessary to allot the space intended for them to other applicants and several motor-cycle exhibits were, in consequence, forced into the basement and Armory gallery. This year the responses were numerous and prompt, so that practically all of the motor-cycle exhibits will be found grouped on the second floor of the Annex. In 1907 there were 11 exhibitors of motor cycles. In 1909 there will be 21.

Accessory manufacturers will occupy the galleries of the Coliseum and Armory, the second floor of the Coliseum Annex and a part of the basement. There have been a greater number of allotments than ever before. A complete list will be ready about a week hence.

Elmore Mfg. Co., Clyde, Ohio.
Woods Motor Vehicle Co., Chicago, Ill.
Thomas B. Jeffery & Co., Kenosha, Wis.
Babcock Electric Carriage Co., Buffalo, N. Y.
Baker Motor Vehicle Co., Cleveland, O.
F. B. Stearns Co., Cleveland, O.
Reo Motor Car Co., Lansing, Mich.
Packard Motor Car Co., Detroit, Mich.
Everitt-Metzger-Flanders Co., Detroit, Mich.
Premier Motor Mfg. Co., Indianapolis, Ind.
Studebaker Automobile Co., South Bend, Ind.
National Motor Vehicle Co., Indianapolis, Ind.
Haynes Automobile Co., Kokomo, Ind.
The White Company, Cleveland, O.
Dayton Motor Car Co., Dayton, O.
Cadillac Motor Car Co., Detroit, Mich.
Maxwell-Briscoe Motor Co., Tarrytown, N. Y.
Locomobile Co. of America, Bridgeport, Conn.
H. H. Franklin Mfg. Co., Syracuse, N. Y.
Apperson Bros. Automobile Co., Kokomo, Ind.
Buick Motor Co., Flint, Mich.
Holsman Automobile Co., Chicago, Ill.
Pope Motor Car Co. (Toledo), Hartford, Conn.
American Locomotive Co., New York.
George N. Pierce Co., Buffalo, N. Y.
Olds Motor Works, Lansing, Mich.
Corbin Motor Vehicle Corp., New Britain, Conn.
Matheson Motor Car Co., Wilkes-Barre, Pa.
Lozier Motor Co., New York.
Bartholomew Co., Peoria, Ill.
Chalmers-Detroit Motor Co., Detroit, Mich.
DeLuxe Motor Car Co., Detroit, Mich.
Mitchell Motor Car Co., Detroit, Mich.
Ricketts Auto Works, South Bend, Ind.

COLISEUM ANNEX, FIRST FLOOR.

Simplex Motor Car Co., Mishawaka, Ind.
York Motor Car Co., York, Pa.
Austin Automobile Co., Grand Rapids, Mich.
Oakland Motor Car Co., Pontiac, Mich.
Pennsylvania Auto-Motor Co., Bryn Mawr, Pa.
Midland Motor Co., Moline, Ill.
Welch Motor Car Co., Pontiac, Mich.

SPECIAL NIGHTS FOR THE PALACE SHOW.

The wants of the inner man are to be well looked after at the coming show at Grand Central Palace. The restaurant will be in the second gallery and will occupy a much larger space than formerly. It will represent an up-to-date German grotto with mosaic flooring and roof covered by vines.

The annual A. M. C. M. A. luncheon will take place Tuesday, January 5, at the Hotel Manhattan, which has been chosen as headquarters for the association during show week.

Special nights as usual will be set apart for various classes. Following a private view of the show on the afternoon of December 31, will come a gala New Year's Eve night. The other special nights will be: Friday, army and navy; Saturday, students; Monday, engineers; Tuesday, society; Wednesday, merchants; Thursday, municipal.

AMERICAN IDEAS IN CONSTRUCTION AND EXPOSITION

By CHARLES CLIFTON, PRESIDENT OF A. L. A. M.

A MOST significant note in the changing day is the sound of the automobile horn. The automobile industry, after a growth of unparalleled rapidity, has been among the first to recover from recent financial conditions. This can be explained by the popular economic demand for self-propelled machines, and the ability shown by the leading manufacturers in the tight-money market. The legitimate automobile manufacturer is typified in an essentially modern man; progressive, or he would not be in the business; alert and full of nervous energy, if he shall succeed and survive. As in the mechanical development of their automobiles, in all their complexity and unknown quantities and ramified interests and industries, the Association of Licensed Automobile Manufacturers has done in several lines, work which is substantially of educational character.

In the preparation of the "Hand Book of Gasoline Automobiles," now in its sixth edition, good use in terms applying to the elements of an automobile is determined. And matter is included in or excluded from the Hand Book *pari passu* as it is really required by the public for its proper information, or calculated to lead to consideration of important points, always short of confusing the well-informed man in his adequate examination of the state of the market.

Standardization.—The work of the Mechanical Branch in frequently breaking virgin ground in automobile engineering, in original research connected with raw and finished material, in the establishment and intelligent use of mechanical and material standards, is well known; the evidence being the magnificent American cars and chassis exhibited at Madison Square Garden shows, and the eminently satisfactory service of the cars for years in the hands of private owners and in contests of nearly all kinds.

The great element of progress in the nineteenth century has been the recognition of the value of scientific generalizations in every department of human conduct. Our science has become sounder, our understanding of its applications clearer; and the public has recognized that scientific conduct of a business means the substitution of universal experience, learned with difficulty and applied with toil, for the narrower range of individual experience which was at the disposal of the so-called practical men of fifty or one hundred years ago. Of this change the engineer is the representative and leader.

Standardization does not mean that cars will all be the same but bear different names. Given identically the same materials, the same designs, and the same class of skilled workman, the different factories will turn out cars of differing merit, regardless of the extent to which standardization may be carried deliberately or unconsciously.

Digest of Periodicals.—The multitude of periodicals published, automobile, engineering, and allied, has recently been called a deluge. Realizing that the art and science of the automobile, as expressed in its technical literature, were developing faster than busy engineers could compass them, the leading association of manufacturers established some years ago a technical library department containing the best books and domestic and foreign periodicals, and regularly issued to its members a digest indicating what was new or worthy in automobile design and construction, including what might be of value as suggestive on account of immediate or future practical bearing.

It has become almost a truism that no other invention has in so short a time excited such a powerful influence upon mechanical engineering and its allied arts and sciences, or interested such a number of experts in its service, as the automobile. The nearest, perhaps, is the electric trolley system in the years of its first rapid development, but this involved quantity rather than quality and variety of work. The automobile industry has called upon all branches of engineering, mechanical, electrical, metallurgical—

to surpass at a moment's notice the highest point of achievement reached by long years of growth. It "hustled the steel-maker." In view of the highly advanced state of mechanical engineering in all its branches a dozen years ago, it would seem that the automobile builder might have been satisfied with facilities so far in advance of those enjoyed by pioneers in earlier arts, but such has not been the case. Year by year his demands have become more insistent for finer materials and better tools. While for several years the American industry rested within the lines of the best general engineering practice, it some time ago took the master hand and rapidly forced the extension of all branches of metallurgy and machine work. One by one the leading material and tools makers awakened to the fact that the best the open market offered was not good enough for the American automobile. Laboratories were fixed up in the different shops for testing all materials, with a rigid system of rejection for falling below specification. About 1905 the Association of Licensed Automobile Manufacturers inaugurated this work.

Mechanical Branch.—The engineers and mechanical heads of the principal automobile makers, composing the Mechanical Branch, have been quick to draw to their logical and accurate conclusion the data on various engineering subjects jointly and severally submitted and discussed at their periodical meetings. Many of the members of the Licensed Association have elaborate laboratories of their own for determining chemical and physical properties of materials.

Numerous A. L. A. M. standards have been made public. The work the Mechanical Branch has been carrying on is in large part for the benefit of the whole industry and so freely given. The proceedings of the body constitute three large thoroughly edited and indexed volumes.

Road Racing.—So much is an outline of how the machines are designed and built. Another phase of the industry is road racing, which within reasonable limits is good for all concerned. Its results are beneficial to the maker, in that it brings out weak points in design and construction that can be corrected easily. Incidentally it is a spectacular and inexpensive form of amusement for hundreds of thousands of people.

Ninth National Automobile Show.—But as a yearly event the converging point of past and future items of interest, the show in the thing the result of the foresight, ingenuity and labor of the factories during the past year. And yet the preparation and conduct of the show itself is alone a world of work and detail. For many months the modus operandi of the Ninth Annual Automobile Show which will open at Madison Square Garden on the third Saturday of January has been under way. The volume of labor and responsibility entailed on the Show Committee and its secretary is difficult to realize. The culminating success does not disclose what has passed to bring it to fruition. A clear conception and knowledge of the art and trade are necessary.

Madison Square Garden is made a complete city in itself. For example, a telephone system larger than used in any city of the second class is especially installed. Mail is received daily.

The show is the biggest trade exposition held in New York, as to variety and number of exhibits, the number of square feet of floor space utilized, value of goods shown, number of attendants required in conducting the show as a whole and its exhibits separately. Over three thousand employees and attendants are regularly on hand. The captains of the industry are there.

In the preliminary stages, engineers measure up the building to make use of all available area for exhibition purposes, considering the comfort and safety of the public as to passageways and regular and emergency exits.

Then the architect studies the building, to get from artistic standpoints, a harmonious decorative scheme, in keeping with the

floor plans of the engineers; lending itself to the practical side of a trade exhibition.

Now follow the constructing builders, to overhaul the building, to bring about the required result. Henceforth the work of preparation divides itself into two great divisions, one of which involves the almost endless communications with the trade regarding space, the preparation of thoroughly indexed rules for the conduct of the show, just to the large and small exhibitors and the management.

Above all a higher standard is maintained. Exhibits which could reasonably be considered freakish or of negligible interest, or irrelevant to the needs of the motorist, are prohibited.

The A. L. A. M. Show Committee has not only maintained the highest standard in the art of show preparation and conduct, but has been the pioneer in many methods now generally accepted in this country as matters of course. Conspicuous among these is the plan of having uniform decoration for all exhibits, obviously necessary for the desired effect of suitable background and setting for the introduction of the new automobile models. Automobile shows abroad have never reached this stage of development.

The other great division of work in making the show is that of the architect and decorator, who have just searched the world over for what is appropriate and best and newest in art. An astonishing number of different kinds of workmen are employed by them, artists, carpenters, drapers, carpet-layers, plaster workers, modelers, sculptors, electricians, telephone gangs, linemen wiremen, cabinet makers, scene painters, plain and fancy iron-workers, sign painters, steeple jacks, riggers, laborers, freight handlers. Labor is certainly represented in its varied forms.

The scene of the show nearing completion for opening is one



of the most interesting and thrilling events it falls to the lot of the average man to see. Great hurry, together with exactitude and high-class work; great crowds of workmen; numerous foremen and superintendents directing and driving the men; designers and contractors whose increased reputations are involved, work ceaselessly for days without sleep. Wit, humor, camaraderie, permeate the whole.

After the show is installed and opened the complete city, under the A. L. A. M. management, is evident, divided into the business and financial sides.

Complete in and out freight and express offices are in working order. Over ten thousand pieces of mail are received daily. The telegraph ticks. The telephones at their busiest time handle more calls than the Syracuse telephone system at its busiest time. A complete day and night police force, uniformed and plain-clothes men, properly officered, patrols the Garden. Ticket-sellers, takers, checkers, counters, porters, cleaners, electricians, wiremen are busy. Decorators constantly keep their work in shape. Carpenters and carpet layers are always at hand.

Band and orchestres attend. Cafés, restaurants and rathskellers are in operation.

The most remarkable feature of all in some ways, is the demolition of the show. What have taken hundreds of people months to get ready in advance, materials, several million dollar's worth of exhibits, are, beginning at eleven o'clock the last night, within the following fifteen hours, packed and shipped from the Garden; the entire exhibit, probably one hundred car-loads of freight, removed, the structure work taken down and the building put in its original condition.

But the object has been accomplished. The A. L. A. M. yearly models have as a whole been suitably submitted to the public.

STATISTICS REVEAL STEADY GROWTH OF THE INDUSTRY

AS a commentary on the growth of the automobile industry and the increase of business in standard high-grade cars, some statistics compiled by M. L. Downs, secretary of the show committee of the Association of Licensed Automobile Manufacturers, have an especial interest. According to the actual figures, the number of exhibitors at the national show in Madison Square Garden has increased 100 per cent. since 1905. In the same period the amount of floor space utilized for this show in Madison Square Garden has increased 40 per cent. This increase in floor space has been cumulative, a little being gained each year through ingenious engineering.

At the next show, January 16-23, there will be about 5,000 feet more space available than there were last year. This additional room has been gained this time chiefly by manipulating the plans of the elevated platform and what was last year the mezzanine floor. Last year there was a mezzanine gallery at the rear of and about four feet above the elevated platform that is built over the boxes. At the coming show there will be no change of level, but the boxes and other seats will be floored over evenly, and there will be a ten-foot passageway between the vehicle exhibits at the front of the platform and the display of accessories at the back of it. The platform will overhang the main floor as before.

The gain in the number of exhibitors represents not so much an increase in the ranks of the manufacturers of licensed cars as it does new exhibits of accessories. There will be more than three hundred exhibitors in the Garden this year, which will exceed all former records.

At the shows in the Garden it has been a problem always how to arrange the signs at the various spaces so that they shall present the minimum of interference with the artistic presentment of the whole. Uniformity in the board signs bearing the names of the makers was first achieved, but even then they were a jarring note in the decorative harmony, and ingenuity was exercised to devise some plan whereby these necessary guideboards might be made a part of the decorative scheme. The satisfactory method seems to have been found now. This has been accomplished by devising an ornamental lamp-post to be placed at each exhibitor's space, the exhibitor's name appearing on the glass panels of the lamp. This feature, it is expected, will work a remarkable change in the general aspect of the whole show from an artistic viewpoint. A suitable setting is as essential to the success of an industrial show as to any other exhibition.

PITTSBURG SHOW THE LAST OF MARCH.

PITTSBURG, Nov. 9.—The next annual show to be held under the auspices of the Automobile Dealer's Association will open in Duquesne Garden, Saturday evening, March 27, 1909, and carry through to the following Saturday. Under the leadership of its president, W. N. Murray of the Standard Automobile Company, the association is making preparations to far excel anything that has heretofore been seen in Pittsburgh in the show line. The other officers of the association are: Vice-president, A. L. Banker, of Banker Brothers Company; treasurer, George T. Moore; secretary, Charles F. McLaughlin.

NEXT GRAND PRIX IN CHATEAULAND.

PARIS, Oct. 31.—Chateauland is practically decided upon as the scene of the next Grand Prix. This week a deputation from the town of Angers waited on the Racing Board, gave particulars of their local organization, the progress made towards the collection of the \$20,000 subvention, and asked for a definite answer. Though no official decision was given, it is understood that after a final visit to the course by the members of the Racing Board the Angers triangle will be accepted.

Already a large plot of land has been picked out for grandstands at St. Germain des Pres, about twelve miles from the town of Angers. As the stands will be on the outside of the course and the gasoline station on the inside, it will be possible to arrive at headquarters at any time during the race. A good road from Angers reaches the grandstands by following the banks of the River Loire.

Although 185 miles from Paris, in a southwesterly direction, the general situation of the Angers course is so favorable that spectators are expected to be almost as numerous as at Dieppe. Saumur is only 25 miles to the east along the beautiful Loire Valley; Tours is about 65 miles away; Blois is not more than 95 miles away; Le Mans is about 50 miles to the north, and all around are small towns capable of providing excellent accommodation for tourists. The course selected is roughly triangular shaped, two sides being straight and the third rather winding, the total distance round being 46.1 miles. It is believed that with such a length not more than 74 cars should be allowed—one car per kilometer. If, as is quite possible under the reduced bore regulations, this number should be exceeded, the club would limit the entries to two per firm.

Owing to troops now serving but two years with the colors, it will be impossible next year to protect the Grand Prix course by military, as on previous occasions. It has been decided, therefore, to employ gendarmes, mounted and on foot, for the most crowded portions of the course, to swear in the greater portion of the 600 road menders of the department, to employ a large number of policemen, and to put club officials at various points around the course.

RAISING THE LIMIT FOR THE BRIARCLIFF.

The committee of New York tradesmen and entrants, to whom the deed of gift for the running of the Briarcliff race was intrusted, has been discussing the weight and cylinder limits for next year's race. It is said to favor 5 1-2 inch cylinders, equivalent to 949 square inches for four cylinders, and 2,500 or 2,600 pounds weight limit. This means greater cylinder volume and weight than the international limits this year and also the limits decided upon for next year. It is argued that the race being intended as a test for high powered touring cars, these increased limits are desirable. If these limits "go," the committee will have to be careful not to advertise their race as an international contest, or they may get into trouble with the Automobile Club of America, under whose jurisdiction international contests in this country are now held, in accordance with the recent agreement between the club and the American Automobile Association.

LYNN WILL TRY AUTO MAIL COLLECTING.

LYNN, MASS., Nov. 9.—Collection of mail by automobile has been introduced in this city by Postmaster Craig, and it is believed that this is the only city in New England with this up-to-date means of handling mail. The postmaster experienced some difficulty in covering the city and making as many collections as were needed by men on foot or with horse-drawn vehicles, and he therefore went to Washington and conferred with the postal authorities. They approved of his plan, and Postmaster Craig has installed a Ford car fitted with a large mail pouch. With the car three collections a day are made, and only one man is required. Previously the work was done by two horses and wagons and two men.



Five 1909 De Luxes Sold to Residents of Marquette, Mich.

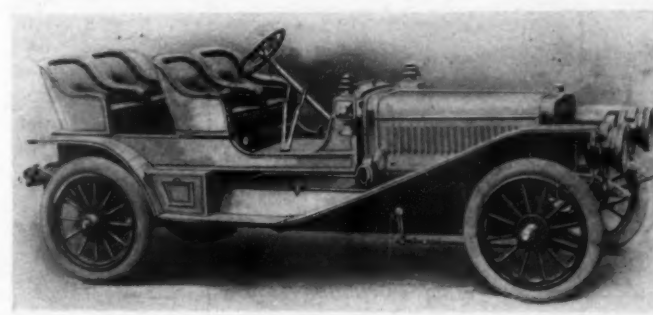
FRENCH MAKERS TO INQUIRE INTO ACCIDENTS.

PARIS, Nov. 5.—Daily newspapers get hold of so many automobile accidents that never occurred, and exaggerate those that did to such an extent that the Marquis de Dion will ask the A. C. F. to vote a special fund for the control of all reported mishaps. The movement was started by a blood-curdling story which got into all the European newspapers of a high-speed car running down a child in the presence of its father. The distracted parent picked up the body of his son, then fired revolver shots after the car, killing the driver and a beautiful girl sitting by his side. Without control the car sped on, mounted the footpath, overturned, and fatally injured another lady occupant of the vehicle.

On official inquiry being made the police authorities could only find one accident in the district named during a period of six months, on which occasion an automobile ran into a horse buggy, the people quarreled over the responsibility, one of the automobilists fired his pistol in the air, but no one was either injured or killed. An accident at the Port Maillot, Paris, in which a cyclist collided with an automobile and was killed was reported in the papers as being caused by the motor vehicle. The police report was to the effect that the cyclist met his death by imprudence, the automobile driver being blameless. Not a single paper publishing the original story would accept the correction, however. With the fund requested by the vice-president of the French Club all motor accidents would be inquired into, and where incorrectly reported correction would be demanded.

SMOKY EXHAUST EXAMINATION IN PARIS.

PARIS, Nov. 5.—So severe are the Paris police against smoky exhausts that the Automobile Club of France has been obliged to fix up an anti-smoke apparatus in its garage. It is a simple apparatus, consisting of a metal pipe leading into the chimneys of the building, provided with a flexible end fitting over the car's exhaust pipe, and an electric fan operating a ventilator. If it is discovered, on starting out, that an engine is smoky, it is immediately linked up to the piping and allowed to run until all the extra oil has been drawn off. It is proposed to fix similar apparatuses in all the city garages. Their use would be cheaper than being caught by the police and being summoned into the municipal courts for smoking.



1909 \$3,000 Winton "Six" Roadster, of 48 Horsepower.



Grabowsky Delivery Wagon Utilized for Charitable Purposes.

A NEW IDEA IN COMMERCIAL CARS.

The Grabowsky Power Wagon Company, Detroit, Mich., will exploit a new delivery wagon, along lines somewhat at variance with customary methods. They will build a line of delivery automobiles, one of which is here illustrated.

Amongst other features, the idea of a demountable power plant is featured. The plan is to afford a ready means of "swapping" power plants in the event a mishap demands some such treatment.

The same company will equip maintenance stations in the various centers of trade, with a view to providing delivery service to all who may care to avail themselves of the same.

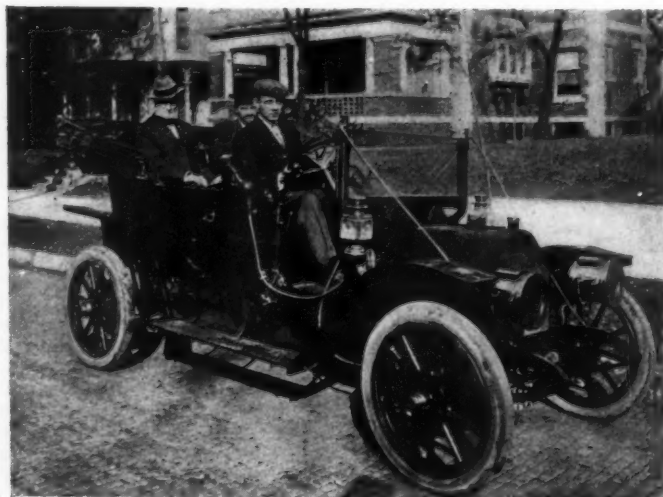
AUTOMOBILE SHOW FOR ST. LOUIS.

ST. LOUIS, Oct. 26.—After many weeks of conflicting reports as to the probability of an automobile show for this city during the winter, the announcement is made that the Automobile Dealers and Manufacturers' Association has actually decided to hold an exhibition during the week of February 15 to 20 inclusive. More than twenty-five of the local dealers have signified their willingness to participate.

NO ENDURANCE RUN BY DETROIT DEALERS.

DETROIT, Nov. 3.—There will be no endurance run under the auspices of the Detroit Automobile Dealers' Association this Fall.

Plans are already being formulated for the annual show under the auspices of the dealers' association, which will be held some time in December or January, and which promises to be on a more extensive scale than ever.



"Uncle Joe" Cannon Used Chalmers-Detroit in Home Electioneering.

WISCONSIN'S GOOD ROADS AMENDMENT.

MILWAUKEE, WIS., Nov. 9.—The so-called "Good Roads Amendment" to the State constitution of Wisconsin was overwhelmingly adopted at the general election, November 3, and the State is now required to give aid to highway improvement and construction work. This is the best news Wisconsin owners have had in a long time. The State geological survey has already started work on laying out an elaborate system of State highways, which, when completed, will form a chain of drives and courses throughout the State. Just before the election opponents of the amendment started a campaign story that the whole matter was a plot of automobile owners to get speedways at the expense of the people. The overwhelming vote showed the fallacy of the argument.

The first work under the new amendment is the five-mile boulevard from the city limits of Milwaukee, an extension of Grand Avenue to the county limits, which eventually will form a boulevard half-way across the State on nearly an air line to the capital, Madison. The distance is 85 miles. The cry of "plot" was raised by persons through whose property the road will eventually cut. Evidently it was not considered that such a thoroughfare would enhance the value of the property.



President Joseph Moon in the 1909 Moon Touring Car.

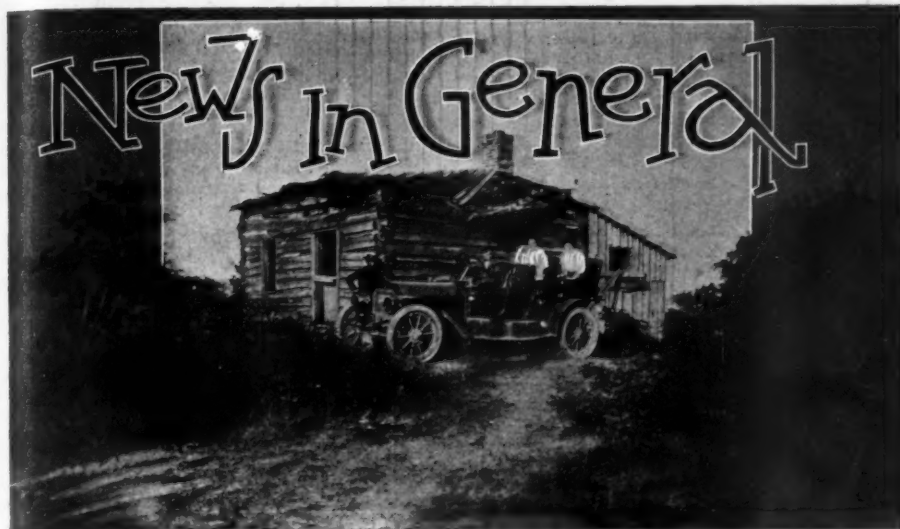
POPE REORGANIZATION ALMOST COMPLETED.

HARTFORD, CONN., Nov. 10.—Vice Chancellor Howell of Newark, N. J., to-day took under advisement until Thursday a petition filed by counsel for the receivers of the Pope Manufacturing Company asking for instructions regarding an offer of \$1,500,000, made by a reorganization committee for the assets, less cash in the hands of the receivers August 1 last, of the Pope company. Should this sale be authorized, as there is every reason to believe that it will, the receivers will at once pay a final dividend of 25 per cent., making 100 per cent. in all, to holders of approved claims against the company.

The vice chancellor also made an order authorizing the sale by the receivers of the Pope company plant at Hagerstown, Md., from which all mechanical equipment has been removed, for \$57,500, and of a bicycle factory at Elyria, Ohio, owned by the Federal Manufacturing Company, all of the stock of which is owned by the Pope company, for \$35,000.

It was stated by receivers' counsel that the reorganization committee approved of both sales.

It appears that about 98 per cent. of the first preferred stockholders and over 90 per cent. of the second preferred stockholders have given their consent to the reorganization scheme and have deposited their respective stocks in accordance with its terms. The plan provides for the issue of the reorganized company of \$800,000 of 6 per cent. notes secured by a first mortgage; \$2,500,000 of 6 per cent. cumulative preferred stock, and \$4,000,000 of common stock.



A Party of Tourists in a Premier in the Tennessee Mountains.

Chalmers-Detroit Non-Stop Runs.

What was probably one of the most comprehensive strokes of newspaper automobile publicity yet attempted in the automobile world, was carried off in a highly successful manner on Election Day. In accordance with a carefully prearranged plan, no less than 100 of the new Chalmers-Detroit "30's" were started on a 200-mile non-stop run simultaneously, in different parts of the country. The event was dubbed the "Election Sweepstakes," and in every case official observers were carried and the gasoline and oil consumption carefully noted. Every Chalmers-Detroit agent notified the home office by wire of the progress of his run, its starting and finishing time, as well as the weather conditions, and the fuel and oil consumption of his car. The telegrams were all in by midnight of Election Day, and an "extra" under date of "Detroit, Midnight Nov. 3," was immediately printed and sent out broadcast, marking the successful culmination of one of the most striking publicity "stunts." According to the results shown, the minimum fuel consumption was eight gallons, and the maximum 16. Every one of the bulletins, or "extras," which were printed in two colors, was sent out under a special delivery stamp, and was in the Detroit post-office at 1 A. M., November 4, so that in many cases Chalmers-Detroit dealers were in receipt of their bulletins the day after the non-stop run was held.

American Car in Sweden.—That an American car is the one best fitted to win the great winter reliability tour held in Sweden each year, is the opinion of Pantus Lindstrom, who is now in this country. Mr. Lindstrom, who is a mechanical engineer, is one of Sweden's best known sportsmen and has driven his own car in all of the winter reliability runs since the first one was held. He is now negotiating for a six-cylinder 60-horsepower Pierce Arrow, with the intention of entering it in the run on his return home. If he carries out his intention the car will be the first one of American make that has ever been entered in this event. Mr. Lindstrom's attention was first attracted to the Pierce Arrow in 1906 when a car of that make, driven by Percy Pierce, won a perfect score in the Herkomer tour in Germany. His determination to buy a Pierce became positive when it scored for both the Glidden and Hower trophies this year.

Locomotive to Show Independent.—Owning allegiance to neither of the big

trade organizations, the American Locomotive Company, Providence, R. I., could be happy with either, "were t'other but away," and true to self-established precedent, will hold forth with neither this coming show season. As was the case last year, the American Locomotive car will be shown at the parlors of the Waldorf-Astoria and will have a three weeks' show all to itself, beginning with the opening of the A. M. C. M. A. gathering at the Palace on New Year's eve, and closing with the end of the Garden show on January 23. The cars will be shown in the parlors on the Thirty-third street side of the big hostelry.

Spokane's Latest Recruit.—Having watched with interest the success of Seattle's city government in employing automobiles for the use of the city engineer and the department of public works, the business men of Spokane have indorsed the wish of Engineer Ralston for a machine. The plan is at first to divide the use of the car between the city engineer and the board of public works. Heretofore he has been unable to visit more than one or two pieces of important work in a day outside the city, but by the use of an automobile he contends that he could see them all in the same time.

Pennsylvania as a Pathfinder.—In preparation for its annual run to Wilkes-Barre and return, January 1-2, the contest committee of the Quaker City Motor Club of Philadelphia used a Pennsylvania car on a two days' trip to Wilkes-Barre and picked out the route. Although the distance from Philadelphia is something like 125 miles, it is especially noteworthy as an endurance route because of the hilly country passed through, the famous Giant's Dispair Mountain being one of the climbs to be made in the course of the run.

Glidden's 50,000-Mile Tour.—Charles J. Glidden, of Boston, is planning to complete his world tour of 50,000 miles started in London in 1901, next year by drives in Spain, Portugal, Tunis, Algeria and Tripoli. He has already driven 46,528 miles in thirty-nine countries. He expects to resume his tour in Algeria next March and contemplates running the total up to 50,000 miles in 45 countries. He has decided to equip his car with Thomas shock absorbers, now being marketed by the Buffalo Specialty Company, Buffalo, N. Y.

Cutting Into Railroad Revenue.—Texas automobile owners are figuring that they are responsible for a considerable loss of revenue on the part of the railroads. At the State Fair at Dallas observations were made of the visiting cars, and it was found that touring parties were present from all parts of the State, a considerable percentage of them in Franklin cars. Believers in the automobile welcome this evidence of the growing popularity of the vehicle, freeing owners of machines, as it does, from the restrictions of railway time cards and reducing distance to a minimum.

Sympathy Not Wanted.—"There can be no doubt that we did have hard luck in the Vanderbilt race," said C. W. Matheson, of the Matheson Automobile Company, recently. "Chevrolet's car went out with a broken cylinder, and Ryall's car was put out of commission by fire. Both of these accidents seemed very strange, inasmuch as these cars had run in the preparatory spins absolutely without trouble. But I am not a candidate for sympathy, and we will do better in future events."

Stearns Prospects in the West.—The success attained by Sales Manager Charles B. Shanks, of the F. B. Stearns Company, on his Western trip has again caused the company to increase the working force both night and day and look for additional building facilities as well. Mr. Shanks reports that at no place did he have any trouble in placing an agency in the hands of people who were not enthusiastic about the prospects of selling all the cars they would be allotted.

More Taxicabs for Gotham.—The latest arrival in the taxicab field of New York City is the long-looked for service of the Hotel Knickerbocker, which made its start last week. The new concern is known as the Universal Taximeter Cab Company, and has for its officers the following: President, J. H. Stack; treasurer, J. H. Norton; secretary, J. F. Mulgrew. The chassis used by this company are made by the Argyll Motor Company, Scotland.

Business Is Better Already.—The best evidence of increased business activity is an increase of orders. The Baker Motor Vehicle Company reports that it has received orders for 16 cars in one day, for immediate shipment, and says that the election of Taft has resulted in telegraphic orders from its agents throughout the United States, demonstrating that many purchasers were waiting to learn the result of the election before placing their orders for cars.

Monogram Oil Scores Heavily.—The fact that the winners of four races out of five held at the opening of the Long Island Motor Parkway, October 10, coupled with the fact that the winner of the 200-mile race in Philadelphia, on the same day, and the winner of the Vanderbilt Cup race, October 24, used Monogram oil, is a source of extreme gratification to the makers, the Columbia Lubricants Company, of New York City.

American Roadster Victories in Texas.—Two leading events in the auto meet of the Texas State Fair, at Dallas, November 1, were won by an American Roadster, driven by Fred I. Tone—the 10-mile for cars of 50-horsepower and the 10-mile free-for-all. In the first event the American kept the lead all the way, finishing in 11:28¾, and the other event was also won with ease. In two trials at the mile, Tone drove in the times of 1:06 and 1:02¾.

Another Newcomer.—The Motor Car Repair Company of New York City, which

has been in the repair business for some years, has branched out and joined the manufacturing forces. The new car is to be known as the Prodal, made in two types, a commercial and a pleasure car. The company has moved into its factory at 509-515 West Fifty-sixth street, where the additional space gives plenty of room for this new venture.

American Motor Company Changes Hands.—The entire stock and business of the American Motor Company, of Eau Claire, Wis., has been purchased by R. M. Burdick and C. W. Dandewalker. The factory site on Water street, where this company formerly manufactured marine motors, is rapidly being equipped for the manufacture of automobiles, which will be the main feature of the product from now on.

Reading, Pa., to Have Taxies.—Not only are the larger cities taking up the taxicab as a necessary convenience, but the smaller cities are fast joining in. The latest addition to the list is Reading, Pa., where the Reading Automobile Company has ordered six motor-cabs from the H. H. Franklin Manufacturing Company, equipped with the standard 18-horsepower air-cooled motor.

K-W Company Enlarging.—The K-W Ignition Company, 34 Power avenue, Cleveland, reports it has found business so successful during the past year that it has recently completed improvements which double the manufacturing space, and at present is busy installing new machinery. The new equipment includes facilities for manufacturing K-W coils and an impregnating plant.

Winton Sales Good for 1909 Cars.—Sales Manager Churchill, of the Winton Motor Carriage Company, feels well satisfied with the sales of Sixes which have been so far recorded. He is especially pleased by the increase in individual orders which the company has received, saying that the number of these is far ahead of the old record made in 1905 with the Model K.

Stearns Company Will Use Hele-Shaw Clutch.—The F. B. Stearns Company, of Cleveland, O., will use the Hele-Shaw clutches, manufactured by Merchant & Evans Company, of Philadelphia, Pa., on their new 25-horsepower shaft-drive car. Many European makers have used this clutch for some time past.

Bendix Company to Move Factory.—The Bendix Automobile Company, which has had its factory and offices in Chicago, has completed arrangements whereby it will move to Logansport, Ind., where the force is expected to be increased from 300 to 500 men.

IN AND ABOUT THE AGENCIES.

American Locomotive, Chicago.—The American Locomotive Company has just completed arrangements for a branch at Twelfth street and Michigan avenue, Chicago. The manager in charge is Benjamin C. Day, who, before joining the American Locomotive Company, was manager of the Winton branch in Chicago. Associated with Mr. Day in the selling department will be B. C. Hamilton, of Chicago, and R. L. Malkin, from the New York headquarters. Adell Starr, an expert from the factory, has been sent on to take charge of the repair work.

In speaking of the new branch and the reasons for its establishment, James Joyce, manager of the automobile department of the American Locomotive Company, has this to say: "Next to maintaining the distinctive quality of the

Locomotive car, the company has been most concerned with its reputation for taking proper care of its customers. As Chicago is becoming yearly a more important metropolis, it has been deemed best for the Locomotive Company to establish its own branch in the city in order to give its customers of Chicago and the middle West the facilities and attention provided in New York."

Studebaker, Glens Falls, N. Y.—D. H. Colles has leased the new three-story brick garage on Warren street and will handle the entire Studebaker line of gasoline and electrics for 1909, covering the counties of Saratoga, Washington and Warren. Mr. Colles was formerly connected with Miller Bros. garage in Glens Falls.

Reo and Premier, Newark, N. J.—The Howe Motor Car Company, Newark, N. J., which has handled the Reo and Premier cars for the past year, has been purchased by M. F. O'Neill, who will continue the business under the name of the O'Neill Motor Car Company at the same location, 51 Bank street.

Great Western, Kansas City, Mo.—B. L. Corlew, who has for some time been carrying on an auto livery, has taken the agency for the Great Western car, manu-



Ex-Champion Corbett as an Autoist.

"Gentleman Jim," at one time king of the heavy-weight pugilists, in the Brush run-about, in front of the theater in a Minnesota town, where he was playing.

factured by the Model Automobile Company, of Peru, Ind. Offices and salesrooms have been secured on Grand street.

Locomotive, Cal.—R. J. Leavitt, the agent for the Locomobile in Southern California, has taken over the garage of the Success Automobile Company at Pico and Hill streets, which he will hereafter make his headquarters.

Pennsylvania Tires, Cleveland.—The Cleveland business of the Pennsylvania Rubber Company has been put in the hands of a local concern known as the Pennsylvania Rubber and Supply Company, which has J. C. McLean as manager.

Jackson, Los Angeles.—The A. E. Gump Automobile Company is making preparations to give up the retail agency of the Jackson cars in Los Angeles and will start in as the Pacific Coast distributors for that machine.

Empire Tires, Kansas City.—Hereafter the Stowe Implement Company will be the wholesale agent for the Empire Tire Company in this section while the Jackson Motor Company will continue to act as the retail agent for Kansas City.

Gray & Davis Lamps, Boston.—This well-known firm of lamp makers, with fac-

tory and main offices at Amesbury, Mass., has opened a branch in Boston at 747 Boylston street. G. W. Morrill has been appointed manager of same.

Matheson, Baltimore.—The Matheson Motor Car Company of Maryland, with offices at 1002 Morton street, will hereafter act as the distributing agents for the Matheson car in Maryland, Virginia, and District of Columbia.

Thomas Shock Absorber, Philadelphia.—The Penn Square Automobile Company, 1420-28 South Penn square, has been appointed Philadelphia agent by the manufacturers, the Buffalo Specialty Company, of Buffalo, N. Y.

Jackson, Council Bluffs, Ia.—The Jackson agency has been taken for Council Bluffs by Henry Sperling, who has for some time been the agent for the International Buggy Company and the Detroit Electric.

Genesee Garage Company, Syracuse, N. Y.—This concern has taken possession of its new salesrooms at 242 West Genesee street. The company is agent for the Peerless, Cadillac, and Pope-Hartford.

Perfection Springs, Boston.—The Perfection Spring Company, of Cleveland, has established a branch office in the Oliver Building, Boston, from which point the Eastern and export trade will be handled.

Cadillac, Washington and Idaho.—The Bringham-Fenn Motor Car Company, with temporary headquarters on Broadway, Seattle, has taken the selling agency for the Cadillac in Washington and part of Idaho.

Pfanzstiel Coils, Boston.—The Bi-Motor Equipment Company, 177 Portland street, Boston, has been appointed New England distributor for this well-known make of spark coils.

Regal, Nashville, Tenn.—J. O. Caldwell, Jr., formerly engaged in the automobile business in Boston, has located in Nashville, Tenn., where he has taken the agency for the Regal cars.

Pennsylvania, Wilmington, Del.—The Pennsylvania car will be represented in Wilmington, Del., by the Bradford Automobile Company, who also have the agency for the E-M-F.

Peerless, Trenton, N. J.—Peerless cars will be represented in Trenton, N. J., by Robert C. Manning, who has bought out the Trenton Auto Garage and Supply Company.

Stoddard-Dayton, Harrisburg, Pa.—The Cox Automobile Company, of Harrisburg, has secured the agency for the Stoddard-Dayton cars for the coming season.

Franklin, Reading, Pa.—The Reading Automobile Company, 26 South Fifth street, has taken the agency for the Franklin cars for the coming year.

Apperson, Los Angeles, Cal.—H. O. Harrison, at present agent for the Oldsmobile, has also secured the Apperson agency for the coming year.

Franklin, Pittsburg.—The Franklin car will be represented in Pittsburg by the Standard Automobile Company, of 5917 Baum street.

Franklin, Dayton, O.—The Peckham Carriage Company, St. Clair street, has made arrangements to handle the Franklin car for 1909.

Franklin, San Francisco.—The Consolidated Motor Car Company has been appointed agent for the Franklin car in San Francisco.

Dayton Airless Tires, Elmira, N. Y.—The Dayton "Airless Tires" will be represented in Elmira by O. J. Manley.

Selden, Newark, N. J.—The agency for the Selden car has been taken by the Auto Exchange, of this city.

Franklin, Milwaukee.—The Franklin will be handled in Milwaukee by W. F. Lange, Farrell avenue.

PERSONAL TRADE MENTION.

C. P. Rockwell, formerly assistant sales manager of Thomas B. Jeffery & Company, has been appointed manager of the New England branch of that company in Boston, succeeding V. A. Charles, who, it is expected, will become New England traveling sales representative. Mr. Rockwell is not a stranger in New England territory, as for sixteen years, before joining the Rambler interests, he was connected with the bicycle and automobile sales department of the Pope Manufacturing Company with headquarters at Hartford.

F. E. Castle, better known in trade circles as "Governor," has acquired an interest in the Atwood Manufacturing Company, of Amesbury, Mass., and this concern will hereafter be known as the Atwood-Castle Company. For the present Mr. Castle will continue to make his headquarters at Detroit. The new company has some extensive plans in view.

Marcus I. Brock, who for the second time became sales manager of the Autocar Company in the early part of this year, has just handed in his resignation to that company and it has been accepted to take effect November 30. Mr. Brock leaves with the good will of the company. He has well-formulated plans for the future, though not yet ready to announce them.

Howard E. Coffin, designer of the Chalmers-Detroit car, and chairman of the executive committee of the Mechanical Branch of the Licensed Association, recently sailed for England and will also visit France, Germany and Italy. He will make a report to the Mechanical Branch on any items of interest appearing at the foreign shows.

Eddie Bald, the old-time bicycle champion, and more recently of auto racing fame, has been appointed sales manager of the Mutual Motor Car Company, the Pittsburgh agent for the Stearns cars. Mr. Bald was formerly sales manager of the Crescent Automobile Company, of Pittsburgh.

F. A. Harris, secretary of the Brush Runabout Company, Detroit, Mich., started on Friday last on the annual trip to the Pacific coast. The company reports that its coast trade has assumed large proportions during the past year and is constantly increasing.

Louis J. Bergdoll, of the Bergdoll Motor Car Company, of Philadelphia, has moved his offices from the headquarters of the Bergdoll Company to the building of the Auto Accessories Company, at the corner of Broad and Vine streets.

George D. Wilcox is now connected with the Omar Motor Company, manufacturers of the Browniecar, Newark, N. Y. Mr. Wilcox was formerly sales manager of the Gearless Motor Car Company, of Rochester, N. Y.

William R. Barnes, formerly of the Hartford Rubber Works Company, has been appointed manager of the Philadelphia branch, to succeed Franklin Kesser, who has taken up other duties at the factory.

P. Tremont Rockett, formerly connected with the sales department of the Maxwell-Briscoe and Stoddard-Dayton Companies, has joined the selling forces of J. M. Quimby & Co., of Newark, N. J.

Willis B. Troy, who was prominent as a manager of racing teams in the old bicycle days, has been engaged by Sidney B. Bowman to look after the Clement-Bayard team in the coming Savannah race.

Lewis H. Kittredge, president of the Peerless Motor Car Company, and secretary and one of the most active and able members of the A. L. A. M., has just returned from a trip abroad.

H. C. Merrill, formerly connected with the Kansas City agency of the Moon car, has accepted a position with the factory as a traveling salesman.

F. A. Stock, formerly of the Auto Stock Company, has gone with the Standard Automobile Company, since this company has taken the agency for the Franklin machines.

A. Gremes, who has been connected with the Chicago office of the Warner Instrument Company, is now in charge of the company's Cleveland branch.

Henry Beegle, formerly with the National Cash Register Company, has gone with the Pittsburgh branch of the Winton Motor Carriage Company.

James E. Iams, of the Iams Motor Company, Pittsburgh, has gone with the Olds Motor Works branch, in that city.

APPERSONS INCORPORATE.

KOKOMO, IND., Nov. 9.—The announcement is made that Elmer Apperson, who has been doing business as Apperson Brothers' Automobile Company (not incorporated), has just incorporated under the laws of Indiana, retaining the old firm name. The authorized paid up capital is \$400,000. This reorganization does not in any way affect the business of the company, as the management remains the same, with the following officers: President and general manager, Elmer Apperson; vice-president, Edgar L. Apperson; secretary-treasurer, Alton G. Seiberling. George H. Strout will continue as sales manager.

In connection with this new move it is interesting to note that Edgar and Elmer Apperson, as pioneers in the automobile industry, have been engaged in their manufacture since 1893.

BUSINESS DIFFICULTIES.

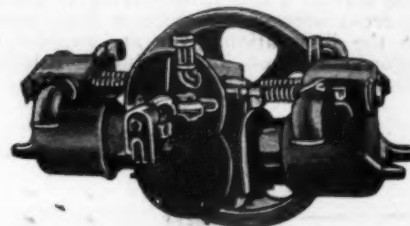
Rainier Motor Car Company.—November 3, the Rainier Motor Car Company, having salesrooms at Broadway and Fifty-fifth street, New York, and factory at Saginaw, Mich., was forced into involuntary bankruptcy by the petition of the attorneys for the following creditors: Pembroke C. Chrysler, J. J. Higgins, and the Hartford Suspension Company. The officers of the company are confident that a reorganization can be effected before long.

"It is simply a case of not having enough cash to get through the product we had planned for 1909," said Paul Lineberger, general manager of the company. "Our assets are far in excess of our liabilities, but during the financial stringency we have been unable to raise the cash to meet our material bills and our large payrolls. With better times at hand we are confident of being able to put through the reorganization we have in mind."

The liabilities of the company are \$220,000, of which \$50,000 is secured. The cars and material on hand in this city alone are reported to be assessed at \$50,000. The company was incorporated in New York City, March 7, 1907, with capital of \$1,000,000, made up of \$800,000 common and \$200,000 preferred stock.

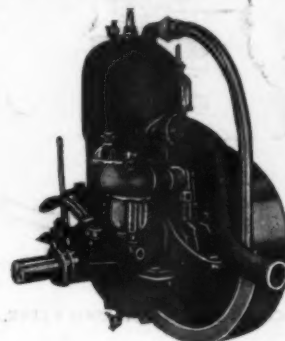
INFORMATION FOR AUTO USERS.

Single and Double Cylinder Motors.—Schaub & Son Machine Company, of 3064 Henshaw avenue, Cincinnati, O., are manufacturing two small motors at a moderate price for marine and automobile use. The



SCHAUB AUTOMOBILE MOTOR.

single cylinder engine is a light, 5-horsepower vertical motor of two-cycle design, built for use in small boats. The two-cylinder is a four-cycle engine of the double



SCHAUB MARINE MOTOR.

opposed design, with a 4-horsepower rating. Both motors are water cooled. The manufacturers claim that the full horsepower rating is developed and furnish them complete with pump, timer and carbureter.

English Valve Tester.—This little instrument is designed to indicate the pressure in pneumatic tires. When a reading is desired, all that is necessary is to



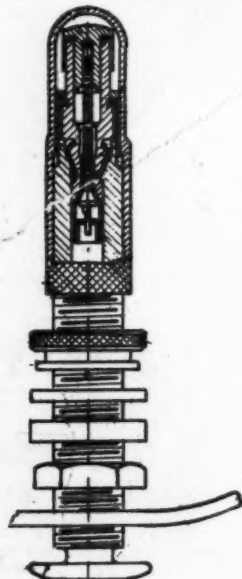
TESTER FOR TIRE PRESSURE.

place the tester over the valve and allow the air to blow through. The instrument is handled in this country by the Motor Car Equipment Company, 1727 Broadway, New York.

"Infallible" Metal Polish.—The U. S. metal polish made by G. W. Hoffman, of Indianapolis, with branches in New York, Chicago and San Francisco, has been used for about fifteen years, which should be a recommendation to those auto users who have had trouble in finding a polish for the bright work on their machine. This polish comes in the form of a paste in three ounce to one pound boxes.

INFORMATION TO AUTO USERS

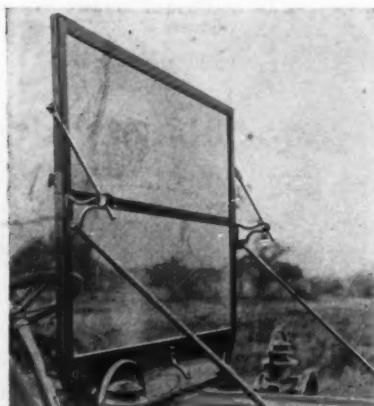
Edco Tire Valve.—Ch. Dien, manufacturers' agent, 35 West Forty-fourth street, New York City, is placing upon the market a tire valve, styled as above, a cross section of which is here given in the illustration. We are enabled to afford advanced information in relation



CROSS SECTION OF EDCO VALVE.

to this very excellent tire valve, notwithstanding the fact that, while letters patent are applied for, the matter is still pending. The vendors of this device need scarcely call attention to the importance of the niche it fills in connection with tires, nor will it be necessary for them to refer to the want they are endeavoring to satisfy. It is pleasant to note that this valve is not kept tight merely if a spring works. As a matter of fact, tightness is the product of direct pressure with no limit to the take-up.

Loring Wind Shield.—J. W. Loring & Son, 140 Union street, Worcester, Mass., have lately put upon the market a new wind shield which has been thoroughly

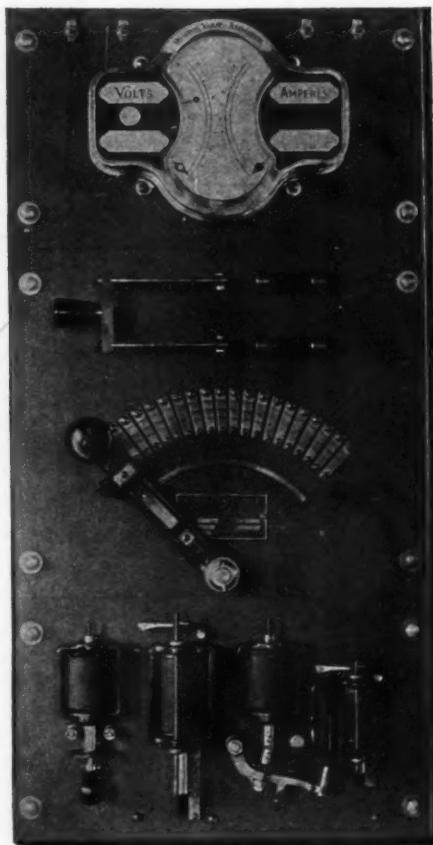


THE NEW LORING WIND SHIELD.

tested, and which they assert will not rattle nor work loose in any of the positions it may be placed in. The frame of the shield is of mahogany, and the trimmings are of solid brass. It may be adjusted to

be held in place both in the upward and folded position by the two thumb screws on each side, which constitute the entire holding device.

New Charging Rheostat.—The Cutler-Hammer Manufacturing Company, of Milwaukee, Wis., offer a rheostat of which the accompanying illustration shows great compactness with the usual slate panel differing in one respect, i. e., the panel is in three sections. The top section includes a Weston volt-meter and the requisite terminal binding posts. The middle section holds a double pole knife switch, the rheostat contact segments, and operating levers,



1 2 3 4
CUTLER-HAMMER CHARGING RHEOSTAT.

while the bottom section is confined to the automatic protective devices. The functional arrangements of this set are explained by the makers as follows: (1) A low-current cut-out which automatically opens the circuit if the current drops to a predetermined minimum. This prevents the battery from discharging into the line should the line voltage drop below that of the battery. (2) A maximum voltage cut-out. This automatically opens the circuit when the battery voltage reaches the point at which the cut-out is set to operate. (3) A solenoid switch, the opening or closing of which "breaks" or "makes" the main line charging circuit. (4) An overload circuit breaker which automatically opens the circuit if the charging current rises to the point at which the breaker is set to operate. This insures the battery against being charged at an excessive rate, which is an extremely important matter, involving the life of batteries to a marked degree.

"U K O" Spark Plug.—As produced by the Utility Company, 636 West Forty-fourth street, New York City, this plug is of the mica genera, and among its points of merit it holds a feature of

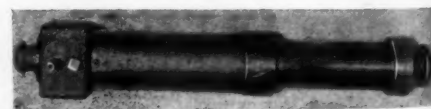


THE U K O SPARK PLUG.

double insulation, platenoid wire node, two terminal nuts, and a solid brass head. The plugs are guaranteed by the makers and should be very acceptable to users desiring a simple, effective, and trim looking ignition accessory.

Cleanola for Polishing.—Since Cleanola was offered to automobile users more than a year ago, it has come into general use, as it has been found most efficient not only in polishing and preserving varnished surfaces of the car, but the top and leather cushions as well. The compound is manufactured from a secret formula by the Cleanola Company, Pittsburg, Pa., and the makers assert that there are positively no acids, alkalis or volatile oils used in its composition, and guarantee it to be absolutely harmless. The company offers to send either dealers or owners of cars a full size 25-cent package for trial on receipt of 10 cents to cover the cost of packing and mailing.

Hydro-Pneumatic Spring.—The Trojan Hydro-Pneumatic Spring Company, Watervliet, N. Y., are offering to the trade their Hydro-pneumatic Spring, in its improved and perfected form, as a leader for 1909. The illustration shows the device, and, as will be observed, it is symmetrical, strong, neat, and presents no obstructions to its ready application. The makers claim for the device that the springs have been made entirely fool proof, self-adjusting in every way, and great care has been taken



THE HYDRO-PNEUMATIC SPRING.

to manufacture a spring which not only has the best riding qualities, but also improves the looks of the car. Everything is enclosed in such manner as not to let the smallest particle of dust or mud penetrate the spring. There is nothing more to look after on the whole apparatus, once the springs are pumped up. On trucks, etc., considering solid tires, the springs make for easy riding, not unlike pneumatics, and as respects the springs, overloading is not a factor.